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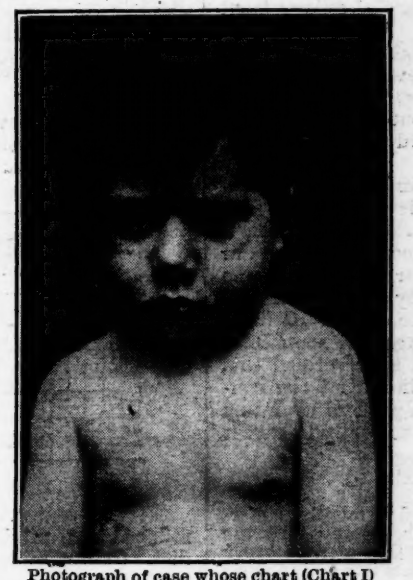
# STATUS LYMPHATICUS FROM THE CLINICAL STANDPOINT.

BY H. C. CAMERON, M.D., F.R.C.P.,

PHYSICIAN TO THE DEPARTMENT FOR DISEASES OF CHILDREN, GUY'S HOSPITAL.

I SHALL not spend time in describing the condition of status lymphaticus as displayed in the *post-mortem* room. The appearances are familiar to all; their interpretation alone is in dispute. Two contrary opinions appear to have their adherents. I believe that neither sufficiently explains the known facts, and desire to suggest a third.

The condition has generally been regarded as a peculiar and somewhat rare inborn anomaly, and its existence has been frequently advanced in the coroners' courts and elsewhere as an explanation for the sudden death of a child or young person which otherwise appeared inexplicable. The condition, however, at least among the faulty children of our London poor, is no rarity. In children dying suddenly, whether, for example, as the result of street accidents or of some virulent and rapidly fatal infection—in children, that is to say, whose bodies have not been emaciated and dehydrated by prolonged illness—it is found in the *post-mortem* room of Guy's Hospital in a proportion of more than 40 per cent. It is possible and probably right to argue that in the case of the virulent and fatal infections the undue rapidity of death has been determined by the lowered resistance of these anomalous children, but the high proportion in which death is due to accident permits of no doubt as to the frequency of its occurrence during life.



Photograph of case whose chart (Chart I) appears below.

Other observers, impressed by the frequency of the condition in the *post-mortem* room, and noting how plump and rounded the bodies of such children appear, have maintained that the large glands and the prominent lymphoid follicles represent the normal condition of health. It is said at Guy's Hospital that this was the teaching of Sir Samuel Wilks. If so, we must be prepared to accept the view that adenoid vegetations, enlarged tonsils, and enlarged cervical glands also come within the category of the normal, for with hardly an exception the overgrowth of the deep-seated lymphatic apparatus is accompanied by the enlargement of these more superficial structures.

I suggest that no matter where the lymphatic glandular tissue is hypertrophied the explanation is the same, and that the hypertrophy may be regarded as the evidence, persisting after death, of chronic irritation in the corresponding mucous membranes by persistent, though perhaps quiescent, catarrhal infection. After death the mucous membranes themselves may show no trace of catarrhal reaction; the enlarged glands remain as evidence of its presence during life.

It is not difficult, I think, to recognize during life a very common condition to which we may give the name of the "status catarrhalis,"* and which is the clinical analogue of the *post-mortem* condition status lymphaticus. Children who show this condition suffer almost continuously from a succession of catarrhs. Skin, conjunctiva, the mucous membranes of ear, nose, nasopharynx, bronchi, intestine, are alike involved in chronic catarrhal processes, which from time to time show exacerbations, with the result that hardly a week passes without a pyrexial attack. In typical examples of this condition the children are fat and watery, with rounded, exaggeratedly infantile bodies. The feet and hands are cold and blue. The hair is sparse, dry, and irregular in its growth, so that the margin of the hairy scalp lacks definition. The skin on the cheeks and on the point of the chin is reddened and infiltrated with papular eczema. There is often intertrigo behind the ear or in the limb flexures. The upper lip is red and sore from the irritation of the chronic nasal discharge. Mouth breathing is the rule, because of the large tonsils and adenoid vegetations, with large everted open lips, which often show cracks and fissures. The chest, for the same reason, is narrow and contracted, and contrasts with the swollen and often pigmented abdomen. The bowels are apt to be loose and often contain mucus. The conjunctiva is reddened and injected. In boys preputial irritation is common, in girls vaginal catarrh. Otitis media is very frequent. The teeth decay early and show circular caries. Urticaria papulata is often a constant symptom. Tempers are usually violent, the intelligence below the normal, so that some have been sent to me as cretins, and the appetite very large.

The symptom, however, upon which I lay most stress is the extreme wateriness of the tissues in these children. Although they present, because of their plump aspect, a fictitious appearance of health, which commonly entirely deceives their parents as to their well-being, they are in reality atrophic children who have retained an undue amount of fluid in the water dépôts of the body. The nutrition of the skin, teeth, hair, and all the mucous membranes, and their resistance to infection, has been profoundly lowered. If, however, a period of higher pyrexia supervenes, from exacerbation of the catarrh in one or more situations, the water is rapidly turned out of the body, and the true atrophy of the child is unmasked. Chart I shows the weight of a boy upon thirty-one successive days. I admitted him for observation, when in his usual state of health, and on the thirty-first day his father removed him because he said there was nothing the matter with the child, and that I was experimenting on him. He had as a rule a huge appetite, but on admission he was homesick and would not eat. In the first twenty-four hours his weight fell nearly 40 oz. as a result of relative starvation, a fall due not, of course, to tissue loss but to loss of water. After one week his appetite returned; he began to eat 8, 10, and 12 ounces of bread in the day, and in addition took one pint of milk. In the second week he regained the water, and his weight rose 3 lb. in seven days. Thereafter it remained on the higher level, with considerable daily fluctuations. The temperature curve is placed above, showing its persistent slight irregularity even in health. I published these observations in a clinical lecture in the *Guy's Hospital Gazette* in December, 1916. Two months later the boy was admitted to Guy's Hospital moribund, and died apparently on the second day of an attack of diphtheria. *Post mortem* a very extreme degree of status lymphaticus was seen. I had under observation at the same time his younger brother, whose condition was very similar. I do not know what became of this younger brother, but the mortality among such children from diphtheria, measles, and whooping-cough is very large.

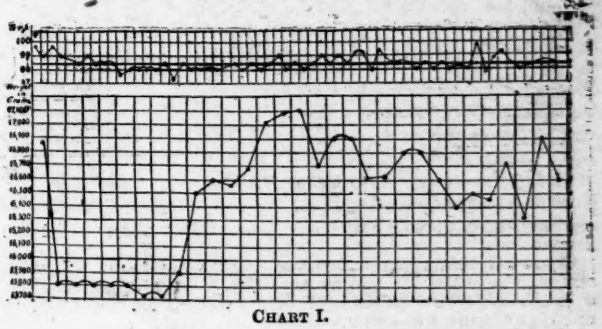


CHART I.

* The condition has been frequently described under different names. Czerny has called it the exudative diathesis, a name which perhaps lays too great stress on heredity as an etiological factor. Our forefathers called it struma or scrophula, names which in the course of time came to apply only to the comparatively numerous cases in which a secondary infection with tubercle had manifested itself.

Clinically we meet with examples of the status catarrhalis both before and after dehydration; in the former case the children are active and lusty enough, in the latter prostrate and complaining. Persistent dehydration is, however, ultimately accompanied by disappearance of the overgrown lymphoid tissue and by a decline in the severity of the catarrhal symptoms. So that, in a sense perhaps, we may regard the higher pyrexial reaction which destroys appetite and produces dehydration as a reaction in the interests of the child. We are familiar with the fact that an acute and spreading eczema is seldom to be seen but in a fat and watery child. If eczema persists in a thin child, it is dry, chronic, and of little intensity. Mothers have observed how rapidly pyrexia clears the skin of eczema. The eczema has struck inwards, they say, as usual observing well, but interpreting faultily. Evidence is not wanting that catarrhs of the mucous membranes behave in the same way as the catarrh of the skin. I recall a little boy of six, admitted with a pyrexial illness which the autopsy six weeks later showed to be infective endocarditis. He showed nearly all the signs of what I have called the status catarrhalis. Yet day by day, as his body became emaciated and dehydrated by prolonged pyrexia, one could watch the nasal discharge cease, the succulent mucous membrane become dry, the tonsils and cervical glands steadily diminish, until at death no trace of enlargement could be distinguished.

In the treatment of the status catarrhalis I feel sure that we must direct our efforts towards achieving a less watery habit of body. The condition is dependent, no doubt, upon hereditary factors to some extent; but it develops unchecked only when hygiene is faulty, and when the diet is excessive and unsuitable.

It is the last point that I wish to deal with more precisely. As a result of the economic policy of the last fifty years, which has been directed towards maintaining a cheap loaf and cheap sugar, the children of our poor are fed almost entirely upon bread and sugar. Of these some eat enormously and almost continuously. A mother and six children, for example, habitually consumed 10 lb. of bread a day. Children of six years of age will sometimes eat 16 or 18 oz. of bread in the day. I have verified this by careful weighing in the ward. I believe that the condition which I describe is very closely dependent upon this enormous consumption of carbohydrate, so vastly in excess of the requirements of the body.

To illustrate this I reproduce four charts.

Chart II is taken from a normal child aged 15 months, suffering from a slight and transient nasal catarrh. Note (1) that the fall in weight during pyrexia is slight; (2) that after recovery the temperature adheres closely to the normal line; (3) that the

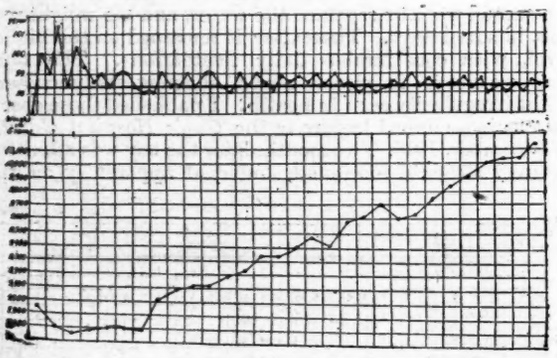


CHART II.

curve of the daily weighing shows a complete absence of large fluctuations.

Chart III shows similar curves, from a child, aged 3, with status catarrhalis, fat and watery, with a huge appetite. The average daily consumption of bread was 15 oz. In addition one pint of milk was given.

Note in contrast to Chart I (1) the irregular temperature curve, (2) the fluctuation in the line of the weight curve. On one occasion there was a sudden gain of 24 oz. in the day.

Chart IV is a curve from a child, aged 2, so watery that the dorsum of hands and feet pitted on pressure. For the first three weeks a milk diet was given, in the last week large quantities of bread in addition. Note (1) the unstable temperature, (2) the rapid fall in weight from excretion of fluid with the loss of œdema (the fall was equal to one-tenth of the body weight), (3) the slight genuine gain in weight in the next two weeks, (4) the rapid fictitious rise in the last week due to retention of water.

Chart V is a curve from a child, aged 4, with status catarrhalis. Till the point marked A he was given as much bread as he would eat. For the first few days he was homesick and had

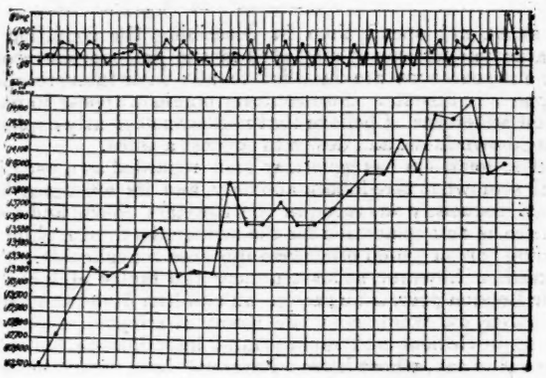


CHART III.

no appetite. Later he ate very largely. At A he was given a spare diet of milk, fish, eggs, green vegetables, and fruit. Note (1) the unstable temperature, (2) the rapid rise in weight while bread was taken freely, and (3) the initial fall in weight after the change of diet.

In suitable cases I believe that the greatest good can be achieved by persisting for many months in a carefully controlled diet in which the starches and sugars are

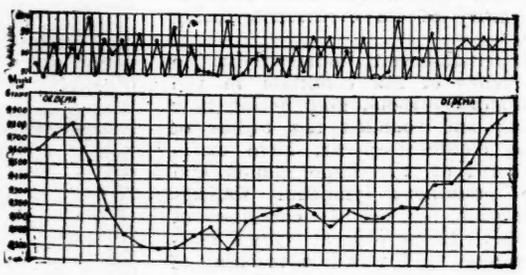


CHART IV.

reduced to a minimum. I have had most success with a diet of skim milk, meat, fish, eggs, green vegetables, and fruit, calculated so as just to cover the physiological needs of the child and controlled by its effect upon the visible catarrhs and palpable glands.

My next point is that if, in this class of case, the vulnerability of the mucous membranes is due to a faul

CHART V.

of nutrition such as I suggest, it follows that local treatment alone is little likely to be efficacious. I have collected a considerable number of cases in which local measures have been steadily pursued for a long time, sometimes for years, without improvement, which have yielded within a few months to dietetic measures on the lines indicated.

In conclusion, I wish to bring forward for criticism one further suggestion. I believe that the status catarrhalis has a very intimate relation to that somewhat indefinite disorder of later childhood which we call rheumatism; watching many of the children from year to year I find it

impossible to avoid the conclusion that the rheumatic symptoms are added at the moment when the catarrhal non-pyogenic organisms pass the barrier of the hypertrophied lymphoid tissue and infect the blood stream. Then the child, losing suddenly his watery infantile aspect and taking on a longer and slimmer growth, is said to suffer from growing pains.

That the irritated glands are more prone to become infected with tubercle goes almost without saying. The children, as a result of faults of hygiene and of diet, suffer from a lowered resistance to infections of all degrees of severity. Prone to chronic and mild catarrhal processes, they also fall a prey more readily to more severe infections, amongst which rheumatism and tubercle occupy the first place, while measles, diphtheria, and pneumococcal infections often produce a fatal result at the very onset of the disorder, sometimes before the usual *post-mortem* appearances have had time to develop. Of sudden death from pressure of an enlarged thymus, the so-called mors thymica, I have not spoken. I have no knowledge of the condition, and I am in doubt whether it exists at all.

### Conclusions.

To sum up I suggest—

1. That the lymphoid overgrowth so commonly found *post mortem* in children is no more than an enlargement from the irritation of chronic catarrh in the corresponding mucous membranes.
2. That such children during life show evidence of faulty nutrition or infection of all epithelial structures, hair, skin, teeth, conjunctiva, and the mucous membranes of respiratory and intestinal tracts.
3. That there is usually present a characteristic wateriness of the tissues, which is dependent to some extent upon excessive carbohydrate feeding, and which is the main cause of the vulnerability to infection.
4. That local treatment of the catarrhs alone is likely to be inefficacious, and must be accompanied by a systematic attempt to achieve dehydration and improve the nutrition of the tissues.
5. That the status catarrhalis in the sense defined is a predisposing cause of rheumatism and tubercle, and carries with it a liability to sudden death at the onset of virulent infections, such as pneumococcal infections, measles, or diphtheria.

## OBSTRUCTION OF THE URETER BY AN ABNORMAL RENAL VESSEL.

BY

R. P. ROWLANDS, M.S., F.R.C.S.,

SURGEON TO GUY'S HOSPITAL; CAPTAIN R.A.M.C.(T.).

THE object of this paper is to draw attention to the importance of kinking of the ureter over an abnormal vessel as a cause of hydronephrosis and stone in the kidney. I have met this condition eight times in the last eight years. Congenital stricture at the junction of the ureter and pelvis of the kidney is another important and more frequent cause, which will be more fully considered, with illustrative cases, in another article.

These abnormalities will be found to be not uncommon if the pelvis and ureter are carefully examined as a routine and essential part of every operation on the kidney. Nephropexy should never be performed until obstruction of the ureter as a cause of the symptoms has been definitely excluded. Many failures of nephropexy, like Case VI, are undoubtedly due to mistaken diagnosis. Similarly nephrolithotomy is not likely to be permanently successful if the stone has been caused by an obstruction of the ureter which is not discovered and relieved at the operation. In two cases illustrating this paper—Cases III and VII—stones had formed behind the obstruction caused by an abnormal renal vessel. The early recognition and treatment of this condition relieves the patient from frequent and disabling attacks of pain, and the kidney from gradual destruction.

### *Pathology.*

The main renal vessels and their branches pass in front of the renal pelvis to reach the hilus of the kidney, but one of the four or five branches of the renal artery usually passes behind the pelvis, as a rule at too high a level to obstruct the outlet into the ureter.

Occasionally, however, an abnormal renal vessel crosses the origin of the ureter on its way to the lower pole of the kidney. This is usually an abnormal posterior branch of the renal artery. Sometimes a similar tributary of the renal vein and sometimes a vein and an artery run together. Rarely an additional renal artery runs from the aorta to the lower end of the kidney. As a rule, the offending vessel lies behind, and hitches up the origin of the ureter.

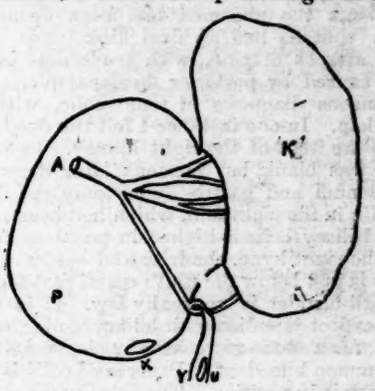



Diagram of obstruction of a ureter by an abnormal vessel. K, Anterior view of left kidney; P, distended pelvis; A, renal artery, a branch of which hitches up the ureter, U, at its origin. The division of the abnormal vessel is sufficient in mild cases, but a plastic operation or a short circuit at X and Y is necessary in severe cases.

The abnormality is a little more common on the left side; in five out of my eight cases the left ureter was affected. In some the abnormal vessel crosses the ureter without obstructing it, but when the kidney is unusually movable some obstruction is likely when the trunk is in the vertical position. This leads to gradual dilatation of the pelvis. Any dilatation and pouching of the pelvis is likely to increase the tension upon the artery, and therefore to increase the obstruction. In the course of time, as the pelvis becomes more and more distended and the heavier kidney descends more, the tense blood vessel exerts more and more pressure on the ureter, inflaming it, and at last causes a real stricture at the site of constriction (Cases III, IV, V, VI, and VIII). Many years ago three good specimens were placed in Guy's Hospital Museum—Nos. 1693, 1694, and 1695. Sir Henry Morris figures two of them in his classical work.[1]

### *Symptoms.*

These consist of:

1. Attacks of renal colic of increasing frequency and severity, which may go on for years before the condition is recognized. As a rule, the patients are over 25 before an operation is considered. Exercise is apt to bring on these attacks of sudden, characteristic, spasmodic, and severe pain, which run from the loin downwards and inwards into the groin, and often into the testicle, which may be retracted. In some cases the pain runs down the front of the thigh; in a few it does not extend to the groin, but is a semi-girdle pain about the level of the umbilicus. As a rule, the pain is intolerable, the patient cannot sleep or lie still, nausea or vomiting are often associated with it, and there may be faintness, pallor, or even shivering. Generally there is some abnormality of micturition, usually increased frequency, irritability, and, perhaps, strangury. At first the urine during and after an attack is normal; later it may be albuminous or even contain blood or pus. Usually there is deep tenderness in the loin, and sometimes a swelling can be felt descending below the costal margin on deep respiration. Early attacks are often far less severe. Sometimes there is shivering and, in late cases, a rise of temperature.
2. In the interval between the attacks there are at times a dull ache, a sense of fullness or dragging pain in the loin.
3. In time the general health deteriorates and the kidney becomes chronically enlarged and tender.

### *Diagnosis.*

A. *Renal colic has to be distinguished from other severe pains in this region*, especially appendicular, biliary, intestinal, and pancreatic colic. Appendicular is

rarely so severe as renal colic, and is not often associated with urinary symptoms, except when the appendix is low down near the bladder or is lying close to the ureter. As a rule, there is tenderness over the appendix and more intestinal symptoms, such as chronic indigestion and, perhaps, a slight elevation of temperature, which is rare with renal colic. Still, it is not uncommon to remove the appendix without relief when the pain is really due to one of the rarer causes of right renal colic. Intestinal colic due to lead is characterized by the lead line and constipation, and is mostly located about the umbilicus. In one of my patients the abdomen had been opened on the assumption that he had an ileal kink (Case VIII). The spasmodic attacks of pain, with tenderness in the loin, sometimes caused by posterior duodenal ulcer, have led to an erroneous diagnosis of renal colic, with exploration of the loin. In one instance I felt the duodenal ulcer adherent to the front of the right kidney. In another the exploration was blank, but melaena later drew attention to the duodenum, and gastro-jejunostomy cured a severe posterior pain in the right loin, which had been mysterious for years. Biliary colic is higher in position, and chiefly located in the right hypochondriac and epigastric regions. Tenderness is just below the ninth costal cartilages, except when the gall bladder is unusually low. It is a common mistake to expect jaundice with biliary colic; really it is exceptional, for a stone more usually obstructs the cystic than the common bile duct. Pancreatic colic is very rare, and is epigastric in position. The renal crises of locomotor ataxy are always to be remembered, but fortunately they are not very common. Intercostal neuralgia due to growth or spinal caries or aneurysm is also to be borne in mind, and an *x*-ray examination is often valuable in distinguishing these. These pains are rarely unilateral. The preliminary pains of herpes zoster have been mistaken for renal colic.

B. *The Various Causes of Renal Colic have to be distinguished from each other.*—Therefore attention may be drawn to some of the most important causes of obstruction of the ureter. No exhaustive list is attempted.

1. *Foreign Bodies Inside the Ureter.*—Stone or gravel; blood clot, as from injury, growth, or tuberculous disease of the kidney; tuberculous débris blocking the narrow channel of a tuberculous ureter; small hydatid cysts passing down the ureter.

2. *Changes in Ureteral Wall.*—Stricture, congenital or acquired; valve formation at junction of pelvis and ureter; myoma or other growths of the ureter.

3. *Pressure upon the ureter* by abnormal blood vessels, especially when the kidney is unduly movable; growth, especially of the uterus; and abscess. I have known an abscess in the lower end of the kidney completely obstruct the only ureter.

Of all these, stone gives the most severe pain and is most frequently associated with bleeding and abnormal crystals in the urine. Severe bleeding is quite rare with the other causes of renal colic except tuberculosis and growth of the kidney. Severe bleeding giving rise to colic is only occasional in tubercle, and then the ureter is somewhat narrowed, and blood or débris cannot pass through the strictured tube. A similar stricture of the ureter is sometimes due to bilharzia.

An *x*-ray examination should always be made, but a *negative report as regards stone in the ureter is not conclusive for many reasons.* A stone obstructing the ureter is usually small except when it is merely projecting into the ureter from the pelvis. The patients are often over middle age and somewhat stout. The stone may be composed of urates, which cast but little shadow. The writer has operated on a number of cases, and removed one or more stones from the ureter when the *x*-ray report was negative. In one instance the patient had been radiographed five times at different hospitals, and I removed a stone the size of a filbert from the upper part of his ureter. In these cases cystoscopy is of the greatest value. Two grains of indigo-carmine are injected into the thigh, and twenty minutes later coloured urine ought to be issuing from both ureters. The absence or diminution of the stream from one ureter is of the greatest significance, and the loin should be explored. In one instance the writer removed a stone half the size of a grain of wheat from the lower part of the left ureter. This had caused attacks of severe colic with occasional and slight haematuria. In some cases a stone is seen projecting into the bladder from the lower end of the ureter. In others it can be felt just above the bladder through the anterior wall of the vagina.

*A positive x-ray report more rarely misleads,* but I remember two instances where I was led to perform blank explorations. In one there were three phleboliths in the branches of the internal iliac vein which closely simulated stones in the lower ureter. In another a calcareous gland in the line of the ureter just above the crest of the ilium simulated a ureteral stone. In several others the size, position, or transverse disposition of the longest diameter of the shadow has prevented an exploration from the loin. Pyelography is of value in the diagnosis of early hydronephrosis, and may help in localizing the cause. Diminution of urine during the pain, with increase afterwards, is suggestive of hydronephrosis. In a few of these cases some swelling can be felt on careful examination during an attack, and the kidney is too tender on palpation. Cystoscopy with the aid of indigo-carmine is also invaluable during an attack. In some later cases the pelvis can be felt independently from and internal to the lower part of the kidney.

It is almost impossible to distinguish between an abnormal artery, a stricture or valve formation, and a small stone in the ureter as a cause of early hydronephrosis, and exploration is the only certain way of ascertaining the cause and treating the condition. Occasionally a movable kidney may give rise to pains which are indistinguishable from those of obstruction of the ureter, and yet the pelvis when examined is found to be normal. Bacilluria as a cause of renal pain is a common pitfall, for it is easy to be satisfied with the diagnosis of bacilluria when there is a real mechanical cause of obstruction, which indirectly causes bacilluria. In the early and hopeful stages of hydronephrosis, however, the urine is sterile, and it may remain normal in every respect for years, but slight albuminuria sometimes accompanies or follows an attack of colic. Later secondary and destructive infections may occur. In the early stages the absence of pathological products in the urine misleads, for it is difficult to realize that any serious changes are going on in the kidney, and in many instances the attacks have been thought to be neurotic, gastric, or even intestinal in origin.

### *Treatment.*

Our aim should be to recognize and treat this interesting condition before the kidney, pelvis and ureter are seriously damaged. Secondary changes in the kidney unfortunately called for nephrectomy in Case III, as it probably has done in many other cases of hydronephrosis and pyonephrosis due to an abnormal vessel which was not discovered at the operation. Moreover, the changes in the pelvis and ureter demanded a plastic operation to ensure efficient drainage in five of my eight cases. How much simpler it is when division of the abnormal vessel is sufficient. When severe or long-continued obstruction has caused a stricture to form at the origin of the ureter or extreme dilatation of the pelvis with relative elevation with valvulation of the ureteral orifice, a plastic operation is imperative. At first I performed an operation after Finney's method of gastro-duodenostomy, but this is more difficult and not so satisfactory as making a short circuit between the lower part of the pelvic pouch and the ureter at the same level or a little lower down. With a shorter incision this ensures better drainage from the lowest part of the pool, especially when the hydronephrosis is of large size. If the opening in the pelvis is round, and also a little larger than the one in the ureter, a more patent channel is established. Nephrectomy should be reserved for extreme cases where the renal cortex is thin or white, or otherwise hopelessly damaged, for the regenerative powers of the kidney are wonderful under good conditions of drainage and asepsis.

Fairly full notes of my cases are appended, especially as the abnormality is apparently unknown to many. Several mistakes in diagnosis are illustrated by these cases.

CASE I.—*Left Hydronephrosis.*

F., aged 35; Guy's Hospital (1909). Recurrent obscure colicky pains in left flank and along the ureter. Urine normal. Radiography for stone negative. Cystoscopy with indigo carmine indicated nearly complete obstruction of left ureter. Exploration of left loin revealed hydronephrosis due to abnormal renal vessels passing behind origin of ureter to lower pole of kidney. These were divided and the obstruction

relieved. The patient died four days later from perforation of a chronic solitary ulcer of the lower end of the ileum. Microscopic examination showed no definite evidence of tuberculosis.

CASE II.—*Left Hydronephrosis.*

Miss H., aged 36, sent by Dr. Halstead of Ramsgate for a large swelling in the left side of the abdomen. For five or six years had had attacks of pain in the left loin, shooting down towards the groin, sometimes very severe and only relieved by morphine. No blood, pus, or small stone had ever been noticed in the urine. About two years ago a distinguished surgeon diagnosed movable kidney and ordered a kidney support, which had been worn ever since without much relief. During the pain a swelling appeared in the left loin, but usually disappeared when the patient lay down. About a month ago a very severe attack occurred and a very large swelling appeared in the left flank, which hardly moved upon respiration and had not since diminished. The urine was normal. The swelling was mostly resonant in front and was thought to be a distended pelvis. An *x*-ray examination had failed to show any stone.

*Operation* (September 16th, 1911).—Before the anaesthetic an injection of 2 grains of indigo-carmine was made into the muscles of the right thigh and the cytoscope passed; the bladder containing three hours and a half urine, only amounting to about 4 oz. The two ureters were then watched. Nothing issued from the left ureter, but in about eight minutes pigment came away from the right. At the end of twenty minutes nothing came from the left. The pigment did not come very rapidly from the right. After the bladder had been emptied the patient was anaesthetized and turned on the right side over a large kidney pillow. The usual incision in the loin was made, the kidney was enormously enlarged, with some difficulty shelled from its surroundings and delivered into the wound; it was then noticed that the obstruction to the ureter was due to the hooking of an artery extending from the aorta into the lower pole of the kidney in front of the beginning of the ureter, the pelvis having descended in front of this abnormal vessel. The obstruction was complete. The ureter itself was natural. On ligaturing and dividing the vessel the junction of the ureter and pelvis was seen to be natural and not narrowed, although there were some adhesions. With a little difficulty the urine was squeezed from the kidney to the bladder without incising the kidney or pelvis. The urine seemed clear as seen from the hugely distended pelvis. When the kidney had been quite emptied nephrorrhaphy was performed with four catgut sutures in the usual way. The kidney tissues seemed fairly good, although greatly expanded, and in view of the mobility and imperfection of the right kidney it was deemed inadvisable to remove a fairly good left. The wound was sewn up with mass salmon-gut sutures except at the hinder pole corner, where a tube was left. The patient was turned over, a catheter was passed, and 16 oz. of clear, slightly blue-stained urine were withdrawn, most of which had been expressed from the left pelvis. The patient stood the operation well and made a good recovery, although there was some suppuration in the wound.

CASE III.—*Right Hydronephrosis.*

Mrs. B., aged 30, in April, 1913, at Guy's Hospital, sent by Dr. Hollings. Attacks of pain in right flank, running to the groin, without pyrexia. Mr. Shenton saw a shadow on the *x*-ray screen, probably a small stone in lower pole of kidney. Later two examinations revealed no stone. I therefore returned to my original diagnosis of appendical colic and removed the appendix, but the attacks recurred. Six months later another radiographic examination suggested a stone at the lower pole of the kidney. The kidney was explored and the renal pelvis was found moderately dilated, due to an abnormal renal artery, which passed behind the junction of the ureter and pelvis and constricted the channel; in fact, when the kidney descended, a considerable pouch came down behind the abnormal artery. On dividing the artery a marked constriction was still present at the junction of the ureter and pelvis, and the opening of the ureter was about two inches above the lower pole of the pelvis. Therefore, the opening was enlarged after Finney's method of gastro-duodenostomy, and through the opening thus made the kidney was examined, but without finding any stone, except a collection of grit in an abscess the size of a filbert at the lower pole of the kidney, connected with the lower calyx. This was scraped away and the cavity drained. As the kidney was somewhat movable, nephropexy was performed. The patient made a good though slow recovery, but about a year later began to have attacks of colic again; she was *x*-rayed several times with a negative result, and it was thought a stricture of the ureter had probably formed again. About a month ago she was radiographed again and a stone was shown just above the crest of the ilium. I explored the kidney and found it intimately adherent to the right flank in a good position. It was impossible to get at the ureter from behind. Therefore the peritoneum was peeled off the front of the pelvis, which was still somewhat dilated, a vertical incision was made on its anterior surface, and a catheter was passed down into the bladder without any difficulty. The finger inside the pelvis discovered the small opening of the upper calyx, and on stretching this and passing the finger up a round stone the size of a small filbert was felt, and removed with some difficulty. The patient did well.

The original cause of trouble in this case was the abnormal renal artery kinking the ureter when the slightly movable kidney descended, and the stone was secondary to the obstruction. It is more than likely that the stone which was removed at the last operation was there at the original one, and probably at the moment lying at the upper pole of the kidney. Since the last operation, about eighteen months ago, she has had occasional attacks of colic. These have not been very severe, and I have had her *x*-rayed once or twice with a negative result. On February 15th, 1917, she came to the hospital with difficulty suffering very severely from colic and looking very ill. She was admitted at once; she had rigors and a temperature of 103°. The temperature kept up the next day, and the loin, which was at first very full, later became slacker, and the water, which was at first clear, became blood-stained.

*Operation* (February 16th, 1917).—I explored the right loin and found the kidney cortex to be shrivelled, whitish from chronic nephritis, and also loose within its capsule, with some fluid within the latter. The pelvis was still dilated, and contained a very large number of smooth dark pieces of altered blood. These looked like beans of various sizes and shapes. There was no stone. The kidney was so disorganized that I thought it wise to remove it. The patient is doing well.

CASE IV.—*Left Hydronephrosis.*

A man, aged 45. Admitted into Guy's Hospital in 1912 for repeated attacks of colic in the left side for eighteen months. He was skiagraphed with a negative result. The urine was normal on repeated examinations. The lower pole of the left kidney could be felt. A belt was tried without any relief. The attacks became more and more frequent, and at one time laid the patient up for three months. As soon as he got work he had to give it up on account of the pain. He at last begged for an operation. He never had any haematuria; the pain was typical of renal colic, and sometimes very severe, but he never had any retraction of the testicle or noticed any variation in the amount of urine passed. He was again examined with the *x* rays with a negative result.

The kidney was explored, and a dilated pelvis was seen. An abnormal renal vessel was also seen, and a condition generally very similar to that described in Case III was found, and similar treatment was adopted. A catheter was passed from the pelvis of the kidney through the sutured part and down the ureter for three days, and then withdrawn. The patient had a good deal of extravasation of urine along the course of the ureter, and pain and distension of the abdomen for a few days, but he made a good recovery.

**It is far better not to leave a catheter in the ureter, but to aim for a free passage with a watertight junction. The convalescence is thereby made safer, easier, and shorter.**

CASE V.—*Right Hydronephrosis.*

Man, aged about 50; in Guy's Hospital; patient of Dr. Lacey. History of several attacks of right renal colic. *X*-ray examinations for stone negative. Definite swelling in the right loin when the patient came to the out-patient department. Therefore exploration of the kidney was strongly advised.

*Operation* (June 16th, 1913).—The kidney was exposed through the usual oblique incision, and there was found to be moderate hydronephrosis, due to an abnormal artery and vein apparently running from the renal vessels downwards and outwards to the lower pole of the kidney and passing *in front* of the ureter at its origin, hitching it up and completely obstructing it. The vessels were tied and divided, and then with some difficulty some of the urine could be squeezed out of the pelvis into the ureter. This made it apparent that there was a little stricture of the ureter at the site of constriction, probably due to the constriction and inflammation resulting from it. Therefore a plastic operation was performed after Finney's method of gastro-duodenostomy, a large opening one inch long being made. A continuous fine catgut suture was used. The kidney was returned and a tube was placed behind it. The wound was closed with mass salmon-gut sutures. The patient did well.

CASE VI.—*Right Pyonephrosis: Abnormal Vessel: Nephropexy had Failed.*

Soldier, aged 25; in the 2nd London General Hospital. Before the war he had had several attacks of colic in his right side. He had several more while at Malta, where he was seen by several surgeons and was examined by the *x* rays, and they ultimately came to the conclusion that his attacks of violent colic were due to a movable kidney with hydronephrosis. Nephropexy was performed, but the patient had two attacks after the operation. He says that he had no pus in the urine before the operation, but in the two attacks he has had since then—one at Malta and one after coming home to England—there was pus in the urine.

He had a third attack, and was admitted into the 2nd London General Hospital, where I saw him, and felt a large tender right kidney. There was no pus in the urine. The temperature kept up for two or three days; an enema was then given, and was followed by sudden relief with the passage of large quantities of pus in the urine. Apparently the enema relieved a kinked ureter. He was then better for a week, but still had pus with bacilluria. A pure cultivation of *Bacillus coli* was found. He did not wish for an operation, but he had another attack on September 26th, 1915; this again was relieved by an enema. He then wished to have an operation. The diagnosis was a kinked ureter possibly due to an abnormal vessel, or possibly obstruction due to a small calculus, but repeated *x*-ray examinations had not revealed any calculus.

*Operation* (September 27th, 1915).—I found the scar of rather a small incision in the loin high up close to the last rib. I made a much longer one below the original and found the old stitches. The kidney was tethered by them still, but considerably enlarged and very vascular. It was difficult to mobilize

without decapsulation, which I had to do, and then found it could not be delivered owing to adhesions about the pelvis. The ureter was natural in size and feel, and was followed up through a constriction in the surrounding tissues to a dilated part in these tissues occupied by a distended pelvis. The sudden transition was very marked. The posterior part of the ring was divided and found to be of fibrous tissue. Only the anterior limit was formed by two large blood vessels and they clearly formed the main obstruction and corresponded to the junction of the pelvis and ureter. The two vessels were clamped, tied, and divided. They entered the lower pole of the kidney and apparently came from the main renal vessels. Owing to the length of the ureter, size of the pelvis, and the adhesions around them, the division of the vessels did not entirely obliterate the kink. As the kidney was returned into its bed the kink became quite marked. I therefore tried to straighten out the ureter by sewing it to the lower part of the kidney, but as this did not seem satisfactory I performed an anastomosis after Finney's method of gastro-duodenostomy, and this proved very satisfactory. A large quantity of pus was evacuated. It was interesting to see the pus find its way down into the ureter directly the constriction formed by the blood vessels was divided and the ureter was straightened out. The wound was sewn up with mass salmon-gut sutures and a tube was placed at the posterior angle of the wound. The kidney capsule was still fixed in good position at the end of the operation, and this maintained the decapsulated organ also in a good position. It was considerably inflamed, and it showed white spots in the cortex, probably indicating small foci of suppuration.

The patient made an uninterrupted recovery, the wound healing primarily in spite of the pus evacuated at the operation.

Case vii.—*Abnormal Artery Causing Obstructed Ureter and Stone in Left Kidney.*

G. L., aged 12 (in Guy's Hospital), had had haematuria and pain on and off in the left loin and flank for two years. *X*-ray examination revealed a stone in the pelvis of the left kidney.

*Operation* (February 4th, 1916).—The usual oblique incision was made in the loin. The kidney was difficult to bring up owing to an abnormal artery entering the lower pole. It clearly constricted the ureter just below the pelvis, and was divided. The pelvis was dilated and inflamed, with adhesion of the fat to it. I incised it and removed a stone the size of a filbert. It was a very spiky and heavy oxalate calculus. The incision in the pelvis was accurately closed with fine catgut, and the fatty connective tissues behind the pelvis were sewn over the incision. A tube was left at the posterior angle of the parietal wound for two days, but no urine escaped, and the patient made a rapid recovery.

Case viii.—*Left Hydronephrosis: Abnormal Renal Artery.*

Lieut. H., C.A.M.C. (Sussex Lodge Hospital for Officers), had had repeated attacks of colic in the left flank for the last ten years or more. He was in Sussex Lodge Hospital about eighteen months ago. *X*-ray examination revealed no stone; there was no tenderness over the kidney and no colic developed. Therefore an operation was not advised. The patient went to a convalescent home. The doctor there thought he had an ileal kink, and sent him to another surgeon, who made a very long incision in the abdomen, found the appendix normal, and said he released an ileal kink. The attacks continued. The patient was sent to Sussex Lodge again for observation, and one day, when I happened to be there, he had the pain; the left kidney was palpable, and he was very tender both in front and behind. Therefore I advised operation, having diagnosed an obstructed ureter, possibly due to an abnormal artery, a small calculus, or a valve.

*Operation* (January 8th, 1917).—The usual oblique incision was made. I found a large hydronephrosis (the pelvis being the size of an orange), caused by an abnormal renal vein passing from the main renal vein downwards behind the ureter at its origin, and then forwards to the lower pole of the kidney. On dividing this it was noticed that the ureter was narrowed at its origin. Therefore, to make quite sure of effecting a cure, an anastomosis was made between the back of the pelvis and the ureter an inch down. A catheter had previously been passed along the ureter into the bladder without any difficulty, and a finger had been introduced into the pelvis and calyces without finding any stone. The exploratory opening in the back of the pelvis was used for the anastomosis. Fine catgut was used. It was noticed that the ureter in its upper two inches was inflamed and dilated, and it appeared probable that under certain conditions the artery constricted the ureter below this dilated part, but that it slipped up as the pelvis became more distended. The patient made a good and rapid recovery.

References.

[1] *Surgical Diseases of the Kidney and Ureter*, vol. ii, p. 297, Figs. 141 and 142.

Harvard University has accepted an offer of £4,000 a year for three years from the American National Canners' Association to be applied to the investigation of food poisoning with special reference to canned goods. The university has made it a condition that the investigation, which will be under the direction of Dr. M. J. Rosenau, professor of preventive medicine and hygiene, shall be conducted with entire academic freedom and the results published.

## THREE CASES OF URETERAL OBSTRUCTION.*

By

Captain G. S. Gordon, C.A.M.C.

I have the honour to present three cases of obstruction to the flow of urine through the ureter. As Moore Barracks Canadian Military Hospital, which accommodates only 1,000 patients, supplied all three of them at one time and from material which had been passed as "fit," this condition can hardly be ranked as a surgical curiosity—it is really one of general interest. In many instances the difficulties in the way of making a diagnosis sufficiently complete to warrant operation are insuperable without instrumentation of a special order, and I venture to put forward a plea for full professional recognition of such special means.

Case i, Pte. McC., aged 21, was sent to me by Captain Wickham, with full notes. He complained that at times, for seven years, he had had pain in the left side of the abdomen and in the left loin, usually associated with exertion or cold weather. The pain was disabling, and the attack would last from four hours to three days. It was sometimes accompanied by vomiting, but not by urinary symptoms, sweating, or diarrhoea. As the attack subsided, however, urination became abnormally frequent. There was difficulty in starting the flow, and pain in the glans penis till it did start; the urine at these times was noticed to be "muddy."

Amongst the remedies tried before entering the army was appendectomy. Since enlisting he had carried on in spite of his intermittent handicap, till finally he had to parade sick, when he was sent from France to England as a case of acute nephritis. He spent seventy-two days in one hospital, where acute pleurisy was added to the previous diagnosis. After thirty-six days at a convalescent hospital he began light duty in his lines, but could not "stick it out." Finally, he was sent to Moore Barracks Canadian Hospital with recurrence of pain in the left side. The laboratory report was to the effect that pus and blood were present in the urine, and the *x* rays report that there was "no stone in the urinary tract." Pulse, temperature, and respirations were normal. Examination of the heart and lungs and abdomen yielded no evidence of any abnormality.

When I first saw him the bladder was normal to cystoscopy. The urine from the left kidney contained pus, and was cloudy but colourless. The urine from the right was free from pus, translucent, and of a deep amber colour. It contained eight times as much urea as the left; no information was elicited on palpation of the abdomen, or over the kidneys behind.

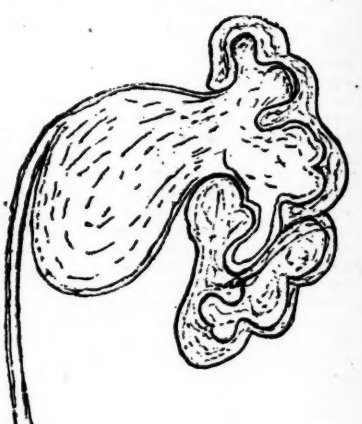


Fig. 1.

At operation the left kidney was found to be a mere shell, with an enlarged pelvis, over which the upper end of the ureter coursed, and to which it was attached for an inch and a half by fibrous tissue. An excellent semi-diagrammatic sketch by Captain F. St. John is shown in Fig. 1.

The specimen shows how obstruction of the ureter occurred and the cause of the pain. This renal pelvis filled tensely with urine at times, and acted as an external ball valve to the ureter. Tension caused the pain characteristic of parenchymatous organs put on the stretch. This man would naturally consult a physician only when pain in the side was present; this pain had not the generally recognized characteristics of renal colic; there would be a rise in temperature, and the urine would be

* Read before the Canadian Army Medical Society at Shorncliffe, England.

free of pus during the attack, because all he would void would come from the unobstructed right ureter. The diagnosis was pleurisy at one time. The kidney and sac were removed, as they were worse than useless. In a case in which the kidney seemed worth saving, a plastic operation to remove obstruction would be indicated.

Case II, Pte. C., aged 22 years, had complained for only one week of undue frequency of urination with urgency almost to incontinence, night and day, and a burning sensation down the urethra for a few moments after voiding. He was suffering from a dental abscess as well, and after this was lanced the urinary symptoms diminished. The urine contained pus and staphylococci. On cystoscopy the mucous membrane of the right ureter was prolapsed, resembling a small pink oblong balloon, at one time tense and globular, at another partially collapsing, somewhat suggestive of the movement of a slug. Fig. 2 illustrates the condition.

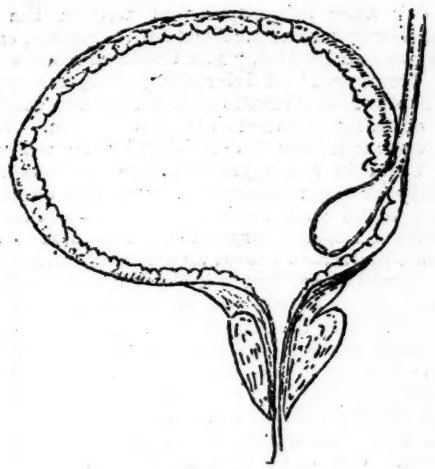


FIG. 2.

The hydraulic pressure in the ureter required to force urine through the small orifice had bulged the lining of the ureter into the bladder, carrying with it the ureteral meatus, had coincidentally dilated the ureter itself and the renal pelvis, and had caused atrophy of the medulla of the kidney and gradually stretched the renal capsule. As a symptom of this condition a woman patient of mine with prolapsed ureter had pain over the kidney, but she was older, had borne children, and the colon bacillus had got a foothold. The pain ceased after a ureteral meatotomy was done through a cystoscope. In Case II one is inclined to think that the prolapsed ureter with dilatation was present without symptoms until the dental abscess freed staphylococci into the blood stream, and then the handicapped kidney and ureter were invaded. The ureteral orifice became smaller with congestion, more prolapse occurred, and the acute condition gave rise to symptoms.

The meatus of the ureter was split up after a preliminary suprapubic cystotomy.

Case III, Pte. C., aged 22, had a dilated double ureter entering a diverticulum of the bladder. This diverticulum when contracting to force out its contents caused regurgitation up the ureter. The symptoms and signs were interpreted with difficulty. The appendix was removed six months ago. There were no urinary symptoms at that time except slight increased frequency of urination. The appendix was found acutely inflamed and adherent to the caecum.

Since then pain over the right kidney had developed, frequency of urination had increased, and to it was added an after-dribble. Another prominent symptom was pain about McBurney's point, and there was tenderness here and in the right costo-vertebral angle. The urine was normal on four examinations, especially made for surgical purposes. Cystoscopy showed, in an otherwise normal bladder, a hole which, on filling the bladder tense with boric solution, was 1 cm. across and 3 cm. deep on measurement. This hole was located at the site of the right ureteric orifice and became much smaller as the urine in the bladder was drawn off. After filling the hole with 40 per cent. argyrol solution *x*-ray examination showed a pouch at the base of the bladder about 2 in. in diameter around which coursed a dilated double ureter. Captain St. John has sketched this for me in Fig. 3.

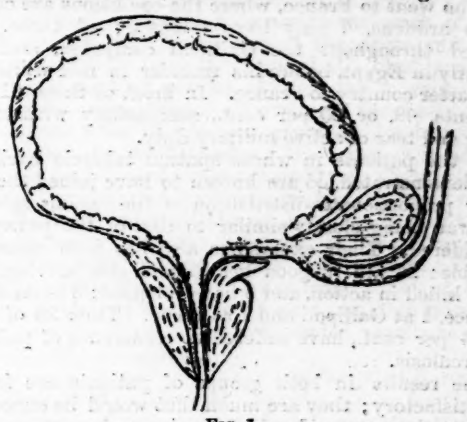


FIG. 3.

The diverticulum was removed and the double ureter was transplanted elsewhere in the bladder. The amount of relief obtained will depend on the degree of renal pelvic distortion already produced by back pressure. There is no pain now, but he has had no violent exercise since operation about three weeks ago.

## A SANATORIUM ROLL OF HONOUR.

BY

NOEL DEAN BARDSWELL, M.V.O., M.D., F.R.C.P.,

MEDICAL SUPERINTENDENT KING EDWARD VII SANATORIUM.

THE place of the sanatorium in a scheme for the administrative control of pulmonary tuberculosis has been the subject of considerable discussion recently. From communications to this JOURNAL and its contemporaries, and from reports of Insurance Committees one has learnt that among experienced observers widely different opinions are held. To the evidence which has been brought forward in favour of or opposed to the value of sanatorium treatment I offer this contribution, which represents the record of war service, so far as it has been ascertained, of patients at the King Edward VII Sanatorium. For an individual with arrested disease to undertake life under active service conditions, especially with the oversea troops, is to submit himself to an exacting test as to the permanence of the benefit he has received—in other words, as to the durability of the arrest of pulmonary tuberculosis following a course of treatment in the sanatorium.

It is well, when dealing with the careers of cases of pulmonary tuberculosis, to consider separately those in which tubercle bacilli were and were not found in the sputum. It is impossible here to summarize for the latter group the evidence upon which the diagnosis was determined. These cases have to be taken on trust. On the other hand, with the record of a positive sputum the diagnosis is beyond question.

Of the patients who, on admission to the sanatorium, had tubercle bacilli in the sputum, 61 are known to have served with the forces. They were discharged from the sanatorium during the years 1907 to 1915 inclusive. Thus, in respect of many of them, the improvement resulting from sanatorium treatment has been submitted to a test of durability represented by several years of full and active work in civil life followed by a period, averaging in these 61 cases some eighteen months, under active service conditions; 24 have served in France, in several instances after some months in Gallipoli and Egypt, their length of service varying from a minimum of nine months to over two years. Three patients went to Egypt, 3 to Salonica, 1 to a staff post in the West Indies, 2 to East Africa, 2 to Gallipoli, 4 joined the navy, 2 are serving in the Flying Corps, and the remaining 20 are either on home service or are still training in this country. The experience of this group of patients down to May, 1917, is as follows:

44 are in good health, and still serving with the various forces they engaged in;
5 have been killed in action, and
12 having relapsed, have been invalided out of the service.

The highest proportion of relapses has occurred amongst the men on home service, namely, 5 out of 20. Of the 24 who went to France, where the conditions are certainly more arduous, 4 only have relapsed; of these, 1 had served throughout the Gallipoli campaign, and subsequently in Egypt, before his transfer in mid-winter from the latter country to France. In brief, of these 61 former patients, 49, or 80 per cent., successfully withstood the wear and tear of active military duty.

Of the patients in whose sputum tubercle bacilli were not demonstrated, 33 are known to have joined the forces, their proportionate distribution in the various spheres of the war being closely similar to that of the patients just considered. Their experience also has been closely comparable; 26 are in good health and still serving, 2 have been killed in action, and 5 have relapsed: 3 broke down in France, 1 at Gallipoli and 1 at home. Thus 28 of the 33, or 84 per cent., have suffered no recurrence of pulmonary tuberculosis.

The results in both groups of patients are far from unsatisfactory; they are much that would be expected by those with any considerable experience of sanatorium treatment. To practitioners, such as a recent correspondent to this JOURNAL,[1] who have yet to learn of an authentic instance of permanent arrest of pulmonary tuberculosis as the result of treatment in a sanatorium, this record may be commended.

It is essential to add that the patients treated at the King Edward VII Sanatorium are drawn from the middle classes. Though not necessitous, they are dependent upon their own exertions for a livelihood. While, on the one one hand, they cannot command the advantages enjoyed by the leisured classes in the way of prolonged treatment under the best possible circumstances, at least they enjoy social conditions infinitely more favourable than those of the great majority of the industrial classes. Herein lies the crux of the question of the value of sanatoriums. It would seem not to be generally recognized that treatment in a sanatorium is to be looked upon less as a cure for pulmonary tuberculosis than as a means of teaching the consumptive how he may hope to arrest his disease and how to prevent his spreading infection, at the same time giving him a good start on the road to recovery. To achieve permanent recovery, one must look to the patient embodying in his daily life after discharge from the sanatorium the principles of the treatment he has learnt. It is during the next twelve or eighteen months that success or failure is determined; the better the facilities for living and working under favourable conditions the more hopeful the outlook. The extreme importance of this social factor has been well shown by Elderton and Perry in one of their statistical studies of pulmonary tuberculosis.[2] They compared the mortality experienced by a number of cases of pulmonary tuberculosis during a period of some years subsequent to their discharge from several sanatoriums; considering separately those discharged from institutions for the industrial classes, and those from similar institutions for the wealthier classes. The comparison shows that in cases of early disease (Group 1) the post-discharge mortality is twice as high among the industrial classes as among the more leisured classes, and that in cases of moderately advanced disease (Group 2) it is more than three times as high. This result is striking and illuminating.

Treatment in a sanatorium is, in fact, of value in proportion to the degree of after-care that can follow it. To obtain anything like comparable ultimate results at sanatoriums for the industrial classes and sanatoriums for patients in better circumstances, there must be a levelling up of the conditions after discharge. Various suggestions have been made, such as country colonies, financial assistance after discharge allowing a consumptive to work for shorter hours or to take up a more suitable occupation which, for a time at least, must be less remunerative, and a better organized system of after-care. The following recommendation in the recent published report upon the incidence of pulmonary tuberculosis among workers in the boot and shoe industry indicates another line upon which much improvement might be effected.

Briefly, the scheme is to establish, in connexion with the ordinary form of sanatorium, a workplace for the manufacture of boots and shoes. Here consumptive operatives in an early stage of the disease, and convalescing patients, could carry on their trade under medical supervision for such hours as they are able, and earn wages in proportion.[3]

### *Conclusion.*

I should perhaps add that in my opinion this record of war service, encouraging as it is, does not warrant the assumption that the former consumptive may undertake military duty with some degree of confidence. On the contrary, such a course strikes me as tempting Providence unduly. At the same time it would seem that it is possible te err on the side of caution. Clearly, every case of apparent cure must be judged on its own merits in respect of fitness for military duty. The extent of the original lesion and the length of period of complete immunity from all signs and symptoms of the disease are factors which help us in arriving at a decision.

### *Addendum.*

The day after this paper was written the BRITISH MEDICAL JOURNAL issue for April 14th appeared, containing a leading article entitled, "The Uses and Abuses of Sanatorium Treatment," an interesting commentary upon the statistics of ultimate results published in the tenth annual report of King Edward VII Sanatorium. With the inferences drawn from the statistics by the writer of this article I am in full agreement. That a sanatorium is essentially for the treatment of early and curable cases, and that to fill such an institution with patients in the advanced and hopeless stages to the exclusion of the more favourable represents a most unwise and extravagant procedure, all will agree. But is it the fact that the favourable cases are thus excluded; and, if so, with whom lies the blame? So far as the Midhurst Sanatorium is concerned, I can answer the first question with some confidence, for since the opening of the institution in 1906 the selection of patients for admission has been one of my duties. The principle strictly adhered to from the commencement has been to admit the clinically most favourable among the applicants. Our experience at Midhurst is that of an average annual admission of some 240 patients carefully selected from the total number of applicants, only 25 per cent. are early cases (Group 1) as defined by the recognized methods of classification of pulmonary tuberculosis.

These cases are sufficient to fill approximately a quarter of the available beds. There is no alternative, then, but to fill the remaining 75 per cent. of the beds with the most favourable among the other applicants. Thus it is that the bulk of these beds are occupied by cases of moderately advanced disease (Group 2), and the remainder, for lack of any more favourable, with cases of much advanced disease (Group 3). The same conditions, but to a more marked degree, would seem to apply in sanatoriums for the working classes. The records at Midhurst, year by year, show little improvement in this respect. During the five years 1906 to 1910, 1,208 patients were admitted, of whom 25 per cent. were cases of early disease. During the following five years 1,112 patients were admitted, the percentage of early cases being practically identical. The only improvement shown in the second period was a diminution in the proportion of the advanced cases. The sanatorium asks for the more hopeful cases, but can obtain them only to a limited extent. It must be either that the cases of early disease do not exist in sufficient numbers fully to occupy existing sanatorium accommodation, or that such cases are not recognized and sent. The latter alternative is the more probable. Some cases, unquestionably, are never early—the disease, as soon as its discovery is possible, has already obtained a wide hold. But to judge from the histories given by patients on admission, the great majority of the more advanced cases could have been detected and treated months earlier, when the conditions were infinitely more favourable for arrest of the disease. The histories of patients admitted to the Midhurst Sanatorium show how frequently the earlier manifestations of consumption are overlooked alike by the public and the medical profession.

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# OBSERVATIONS ON THE PATHOLOGY OF BARCOO ROT (VELD SORE?); WITH SUGGESTIONS AS TO TREATMENT.

BY

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By the middle of the summer of 1916 a number of men of the Anzac Mounted Division, which had been operating in the desert east of the Suez Canal for upwards of six months, suffered from spreading superficial ulcers on the back of the hands, extensor surface of the forearms, and, to a less extent, on the back of the feet and on the shins. The ulceration resembles that met with amongst bushmen in the back-blocks of Australia, and is known locally as barcoo rot. It was recognized by the men as the same disease they had seen or experienced in Australia.

Superficial ulcers were also troublesome during the Boer war. They affected troops kept on trek on the high veld, and the disease was labelled "veld sore." A short description of veld sore and its pathology was given by Ogston (1901). Two years later Bishop Harman (1903–4) published a detailed study of veld sore, and I gather from his description that veld sore and barcoo rot are closely allied, if not identical diseases. According to Harman the disease affected Boers and British alike whilst campaigning, but natives were free from it. The Boers did not suffer whilst dwelling on their farms. Harman (loc. cit., pp. 8 and 9) is satisfied from the epidemiological data that the restricted range in diet during operations on the veld is an essential factor in bringing about the condition.

Dolbey (1901) concludes from his experience that troops were not liable to veld sore until they have been at least three months in the country. Life during the dry weather in the Australian back-blocks, and campaigning on the high veld or the Sinai desert present conditions which are not unlike. In all three cases water for washing is minimal; prolonged subsistence upon bread, biscuit, and salt or tinned meat, with lack of fresh vegetables, is the rule. Further, appropriate dressing of the sores in the early stages is difficult or impossible whilst the patient continues his occupation. Like veld sore, barcoo rot is difficult to cure in the above conditions, but readily yields to treatment when the patient comes into one of the towns. To what extent this is to be attributed to facilities for greater cleanliness, appropriate surgical dressing, or to dietetic improvements, is uncertain.

### *Brief Description of Barcoo Rot.*

The patient may remember abrading the skin, but whether or not, the first sign is usually a bleb or blister containing thin watery pus and surrounded by an area of slightly inflamed skin. The blister may be the size of a sixpence, or even larger, but before it reaches this size it is generally broken. The denuded surface shows little tendency to heal, but slowly extends at its margins, at the same time deepening until there are no more epithelial structures left. The ulcer, however, remains shallow, and it is unusual for the fibrous layer of the skin to be destroyed unless it becomes infected with virulent staphylococci. The glands are not inflamed unless secondary infection occurs, and there are no constitutional symptoms.

When healing has occurred areas of glossy skin, more or less denuded of hairs and sweat glands, are left. Cicatrization does not occur unless the true skin is destroyed. Infection of fresh areas of skin in the neighbourhood is usual, so that the patient has several ulcers of different ages. The disease in its minor forms is extremely annoying and, when the ulcers have become large, incapacitating.

The symptoms and pathological findings have no resemblance to the slowly evolving leishmaniasis known under the names of *Bouton du Nil*, *Clou de Biskra*, *Bouton du Caire*, etc.

### *Observations on the Pathology of Barcoo Rot.*

On a visit to an outlying field ambulance I was shown twenty men admitted for obstinate ulcers of considerable extent. The ulcers were shallow, mostly on the back of the hands and wrists—that is, in areas exposed to small injuries, and rich in hairs. The smooth surfaces were free from ulcers, and the progress of an ulcer appeared to be inhibited as soon as it extended to a hairless portion of skin.

It seemed advisable to examine the state of the hair follicles, both within and around the ulcers, and I plucked a number both from the base of the ulcer and from the reddened slightly swollen skin at the margin; many of the hairs were loose. I wrapped the hairs in paper moistened with 70 per cent. glycerine for transport. On my return to the laboratory the hairs were stained by Gram's method and counterstained very slightly with weak fuchsin, dehydrated, and examined in clove oil or balsam. In all of the hairs withdrawn from the base of the ulcers, and in many from the inflamed margin, Gram-positive microbes were present in the hair sheath. They were mostly cocci, but in the hairs from three of the cases bacilli, which at the time I took to be diphtheroids, were also present. The infection extended usually to the lower end of the hair follicle.

Some of these cases were subsequently removed to No. 3 Australian General Hospital, Cairo, for observation and study. They were placed under the care of my comrade Captain Maclure, to whom I am much indebted for his kind co-operation.

Infection of the hair follicles was confirmed by microscopical examination of fresh material, and cultures from the bases of removed hairs and from the contents of early blebs were made upon blood agar and ordinary agar. *Staphylococcus albus* was the predominating organism, but some *S. citreus* and a few *S. aureus* were also present. In one case a diphtheroid was abundant. This proved to be *B. diphtheriae*,* but I did not discover this until some time afterwards. Diphtheroids are not uncommon in lesions of the skin, such as ulcers, vaccinia pustules, impetigo, and eczema,† and I regarded it as a chance concomitant of the staphylococcal infection, and did not investigate it further at the time. The case differed in no obvious way from the others, and there were no constitutional symptoms at the time.

The microbial infection of the hair follicles appeared to be confined to the connective tissue sheaths, except in very badly affected hairs, in which the base was disorganized and the layers of the root sheaths unrecognizable.

The pus from the early blisters before they were broken afforded only growths of staphylococci. I generally found there was a hair, often a very small one, passing through them, and the follicle of the hair was invariably infected with staphylococci.

The cocci cultivated were, as mentioned above, mostly varieties of *Staphylococcus albus*, with a few *S. aureus* and *S. citreus*. Their virulence is presumably low, for in uncomplicated cases there is no tendency to invade the true skin, and no involvement of the lymph glands occurs.

A few experiments were made upon the biochemical characters and pathogenicity of some of the cocci isolated. Six white staphylococci colonies, derived from four patients, were examined as to their action on milk and gelatine and their fermentation of lactose and mannite. They all clotted milk and liquefied gelatine with varying rapidity, and fermented lactose. None fermented mannite. They were not haemolytic for human blood as tested by Eijkmann's agar plate method. They appear, therefore, to correspond to Welch's *Staphylococcus epidermidi albus*, as defined by Gordon (1906).

The cultures of *Staphylococcus aureus* and two of *S. citreus* from hair follicles which were tested in the same way, fermented mannite. I could not make a number of experiments on animals, but two rabbits injected intravenously with 2 c.cm. of a broth culture of the white cocci and one with the same quantity of the broth culture from the *aureus* colonies were not made manifestly ill.

My observations on the bacteriology of barcoo rot are in general accord with those of Ogston (1901) and Harman (1904) upon veld sore. Ogston and Harman, however, make no mention of any infection of the hair follicles. Ogston saw only Gram-positive cocci in fluid from the edge of ulcers. Harman cultivated only staphylococci from the

* Fatal for guinea-pigs in doses of 0.5 c.cm. eighteen hours' broth culture in thirty hours; 0.1 c.cm. antitoxin protected against 2.5 c.cm.

† The records of the finding of diphtheroid bacilli in skin lesions are collected by Graham Smith in Chapter IX of his book in collaboration with Nuttall, *The Bacteriology of Diphtheria*, Cambridge University Press, 1903.

unbroken vesicles. These gave the cultural characters of *Staphylococcus pyogenes aureus*, but grew rather more abundantly on culture media than a virulent strain with which they were compared. They were not virulent for rabbits. Harman was much impressed by the resistance to heat, to the effects of drying, and to the action of corrosive sublimate possessed by his cultures, but this was not, I think, greater than has been met with in some strains of staphylococci.

The epidemiology of veld sore was carefully studied by Harman, but he could find no indication that the infection spread from one to another among the troops, and barcoo rot affects men living in solitude. Neither disease seems to be associated with particular occupations. It would seem probable that barcoo rot, and possibly veld sore too, is due to the infection of the epidermal structures with staphylococci of low virulence, such as abound upon the skin. In barcoo rot the infection of hair follicles is apparently the common way in which it begins, and the usual manner in which it spreads at the margin of the ulcer.

Harman's view of the pathology of veld sore I take to be that under ordinary nutritive conditions the skin cocci of low virulence are not able to "make good" against the local defences, but that in the case of men too long upon a restricted diet the defence is weakened, and they are able to infect the epidermal structures but not the true skin. He regards it, in fact, as a minor scorbutic manifestation. This may well be, but improper dressing and neglect of the sores also play an important part, for I have seen them heal up rapidly under appropriate dressings when no improvement in diet was possible. The fact recorded by Harman that the African natives did not suffer whereas the Boers did suggests, however, that lack of washing and of simple surgical dressing is alone an inadequate explanation.

*Treatment of Barcoo Rot.*

In hospital the ulcers generally heal up slowly under any sort of wet antiseptic dressing, but are very difficult to deal with in the field. A wet dressing is unhandy when a man has to go about his business and it is difficult or impossible to change it sufficiently frequently. Moreover, in a hot climate it soon becomes converted into a dry dressing and adheres to the ulcer.

Harman found that if the ulcers were thoroughly cleaned up, powdered with calomel and covered with cotton-wool, the last being affixed by strapping, good results followed. This method is satisfactory for small ulcers, but the cleaning up must be very efficiently performed.

In view of the observations on the pathology of barcoo rot described above, it seemed not unlikely that the infection of the hair follicles was largely responsible for the continuance of the ulcerative process in the centre, and its progress at the margins of the ulcer. An infected hair follicle is like a foreign body, and healing will not occur until it is either sterilized or ulcerated out. Acting upon this idea I removed the hair or hairs traversing the early blebs, and found that these healed straight away. The patients soon realized the efficacy of early removal of the hair follicles in suppressing these secondary infections, and undertook this part of the treatment themselves. Next, working on the principle employed to restrict a bush fire by burning an area in front of it, I attacked the larger ulcers, removing the hairs from their base and around their margins, and was pleased to find that the ulcerative process was stayed, and healing commenced at once.

The extensive ulcers in the floors of which no epithelial structures remain, naturally take a long time to heal, but this period Captain Maclure abbreviated by the transplantation of numerous snippets of skin from the abdomen.

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# A SIMPLE DEVICE FOR THE GROWTH OF ANAËROBES ON PLATES.

BY

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MUCH of the confusion that exists in the literature on anaërobes is due to the difficulty of growing these organisms in pure culture. In the case of most aërobic organisms a plating out process is a relatively simple operation, and but little trouble is experienced in getting pure cultures of any organism provided that the medium used be suitable for its growth. The anaërobes, on the other hand, exhibit symbiosis to an extraordinary degree, so that an apparently pure culture of one organism, which gives fixed and regular reactions through a series of subcultures, may yet prove in the end to be contaminated. The *B. enteritidis sporogenes* of Klein, for example, was ultimately found to consist of a non-motile sugar-splitting organism together with a motile proteoclast; and there are doubtless other instances of this confusion to be found in the literature on anaërobes.

All the anaërobes we have so far isolated from wounds belong to one or other of two main groups. They are either sugar fermenters or they are protein digesters, and it has been found possible by varying the constituents of a nutrient medium to encourage the development of one or other type of organisms. Thus a mixture containing *B. welchii*, when planted into a medium containing sugar fermentable by this organism, will yield a culture in which *B. welchii* preponderates, and in which the development of other organisms is at first held in abeyance. By a series of replants in such a sugar-containing medium at suitable intervals—a process, that is, of intensive culture—it becomes possible to get a relatively pure growth of *B. welchii*. This result, however, marks but the first stage in isolation, and the subsequent purification of the culture can be effected only by repeatedly picking off isolated colonies from the surface of some solid medium. Slopes in tubes are inconvenient for the purpose, and recourse must be had to plates.

There are two methods in general use for putting up anaërobic plate cultures. In the first the plates are placed in some air-tight receptacle from which oxygen is removed by absorption, by exhaustion, or by combustion with hydrogen. This method has its disadvantages in that the receptacle is as a rule bulky, and takes up much space in an incubator. It is, moreover, difficult to determine the progress of growth without opening up the whole apparatus.

The second method consists in the incubation of each culture plate separately, and the device which embraces this principle, and which is perhaps best known to British workers, is the capsule devised by McLeod. This consists of a glass plate of special design superimposed on a porcelain receptacle containing pyrogallic acid and soda. The apparatus is very efficient, but it has the disadvantage that the amount of available surface space is small, and also that it is not always easy to see the colonies against the white background of porcelain.

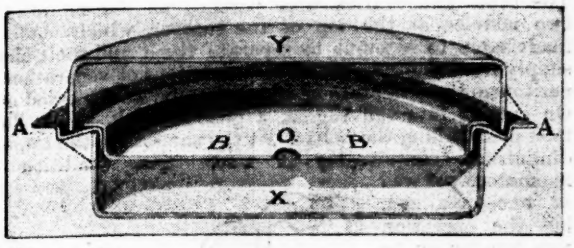
The device herein described is a cheap and practical application of the second principle so as to use the material that can be found in any laboratory. Drugs in powder are now exported to France in cardboard cylinders, which are provided with metal tops and bottoms. These can be found in any hospital dispensary. The metal top consists of a circular disc or lid, which when pushed down fits tightly into a supporting flange, the principle being one which is used extensively in trade for tins containing paints, enamels, glaxo, etc. The combination of supporting flange and lid (see diagram) presents a circular groove or trench on both its upper and lower aspects, and so forms a suitable coupling adjustment for the two halves of a Petri dish of suitable size.

The diagram represents the apparatus in cross section, A being the flange and B the lid. The upper surface of the lid B is painted with black enamel, and its centre is occupied by a central aperture, O.

*Method of Use.*

1. The grooves on both the upper and the lower surfaces of the flange and lid are filled with plasticine. One or two teaspoonfuls of pyrogallic acid in powder are placed in the lower

half of a Petri dish, X, and the metal plate is pressed firmly down on to it, so that the edge of the dish is securely embedded in the lower plasticine containing trench. Extra plasticine is added all round up to the level of the dotted line shown in the diagram so as to make an absolutely air-tight lute.




2. The other half of the Petri dish, Y, is sterilized in a larger Petri plate in the hot-air oven, filled up with a suitable amount of agar or agar-gelatine, and when cooled is inoculated.

3. Saturated caustic soda solution, 10 c.cm., is poured through the hole O into the plate X, and then as quickly as possible the plate Y in an inverted position is pressed firmly down into the upper trench and luted down with extra plasticine all round up to the level of the dotted line shown in the figure.

Organisms thus grow on an agar surface in an air-tight box from which most of the available oxygen is absorbed by sodium pyrogallate. The smearing of the agar surface with alkaline egg-albumen at the time of inoculation greatly facilitates growth. Where difficulty is experienced in getting growth by this method, the organism may be coaxed into giving good surface colonies by a preliminary passage through several subcultures in alkaline meat under paraffin.

The following organisms have been successfully cultured by this method—*B. welchii, B. von Hibler IX, B. aërofetidus, B. fallax, B. oedematiens, B. sporogenes, B. histolyticus, B. tetani, B. paraputrificus coli, V. septique*, and others not yet definitely classified.

*Advantages of the Method.*

1. The procedure is a simple one and requires no special skill.

2. The lid, B, serves a double purpose. It provides a black background against which colonies can be easily discerned, so that the progress of a culture can be watched from day to day. It also prevents soiling of the agar surface with pyrogallate solution.

3. The apparatus takes up very little room in the incubator. A series of cultures can be stacked one on top of the other, and each one can be taken out and examined separately.

4. It is cheap; the tin lids cost but a trifling sum. They are unbreakable, and can be used again and again.

The prepared and blackened metal plates, with or without 3½ in. Petri dishes to fit them, may be obtained from Messrs. R. B. Turner and Co., 9-11, Eagle Street, Holborn, London.

I have to thank the Medical Research Committee for placing a supply of these at my disposal.

## MELAENA AND HAEMATEMESIS NEONATORUM.

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IN this very fatal condition the details of a successful treatment are useful, and for that reason I submit the notes of a case which occurred in my practice:

The mother was a young primipara, and delivered herself of a full term female, weight 8¼ lb., length 22 in., after seven hours' labour, on March 16th, at 8 p.m. The family history was good on both paternal and maternal sides.

I saw the child on March 17th, in the morning, and everything was normal. I then left town for twenty-four hours, and did not visit the case again until the following evening. On March 17th, at 5.30 p.m., the baby vomited a little brown fluid. For the next three hours she was very restless. At 9.30 she passed a large tarry motion with streaks of blood through it; at 10.15 she vomited about 3 oz. of red blood. From 10.30 until 11.0 she was very collapsed, with lips and fingers cyanosed. At 11.30 she passed a very large bloody offensive motion. She seemed in pain, and did not sleep more than ten minutes at a time. On the morning of the 18th, as I was away, Dr. Fitzgibbon kindly saw the patient for me. At 9 a.m. she had a very large fluid motion, with blood through it. At midday, horse serum 2 c.cm. was injected into the loin. Very shortly after this there was a motion containing a large quantity of blood. Some blood was vomited. I saw her at 5.50 p.m., and soon after this there was a large tarry stool. At 10 p.m. horse serum, 4 c.cm., was injected. On this day she had four doses of a mixture containing calcium lactate, gr. 1, and adrenalin chloride 1 in 1,000, one minim to each dose. She had a restless night, waking every hour.

March 19th. At 3.15 a.m. and 4 p.m., large melaena were passed. She looked better and I decided to wait before giving any more horse serum. However, after the second tarry stool, I injected 5 c.cm. hypodermically. The adrenalin mixture was administered twelve times. She had a good night and slept well.

March 20th. Slight melaena twice—at 3 a.m. and 4 p.m. At 4.45 p.m., 5 c.cm. of horse serum hypodermically; twelve doses of the mixture in the twenty-four hours. She was very restless and evidently in great pain, which was probably due to flatus.

March 21st. In much pain. At 2 a.m. a small rubber catheter was passed per rectum and a large quantity of flatus came away. The chill was taken off the water, which until this day had been given dead cold. There was one small tarry stool.

March 22nd. At 2.20 a.m. the infant was very restless and inclined to cyanosis, and looked as though about to die. Horse serum, 5 c.cm., was given by mouth; this was repeated at 9.30 a.m. She seemed weak through the day, and I decided to give her something stronger than water. I therefore ordered albumin water (one egg to the pint of water) every two hours, which was the first "food" given. This was the sixth day of the illness and the seventh since birth. The mixture was given eight times in the day.

March 23rd. Albumin water 2 oz. every two hours. Mixture eight times. Horse serum, 5 c.cm. twice in the twenty-four hours by mouth. Two motions, improved, but still rather tarry. One pound weight lost in the week.

March 24th. Albumin water during the night. At 8.30 a.m. the first slightly yellow motion. At 11 a.m. rennet whey 2 oz. Serum 5 c.cm. by mouth twice. Two more yellow motions. Rennet whey through the day. The mixture three times.

March 25th. The mother's breasts had been kept pumped in order to continue secretion, and on this day the baby had 2 drachms of breast milk with rennet whey. Serum 5 c.cm. by mouth. Mixture three times in the day. Two motions.

March 26th. Whey and breast milk. Mixture three times daily.

March 27th. Breast feeding only.

After this the baby gradually improved, and is quite healthy to-day.

Many theories have been brought forward to account for intestinal bleeding in the newborn, and I do not intend to enter into a discussion of them here. I believe it possible that one of the unknown toxaemias of pregnancy which circulate in the mother is carried to the child, whether causing a premature gastric secretion as suggested by Dr. Crawford, or in what other way the ulceration is caused, it is impossible with our present knowledge to state. The very large *offensive* motion which was passed on the first day of the illness was strong evidence for a toxaemic theory. In necropsies on eclamptic patients, haemorrhages have been found in various intra-abdominal sites. When eclamptic fits occur in infants, when scopolamine can be demonstrated in the urine of the newborn, why should not gastro-intestinal haemorrhage be caused by a toxaemia carried from the mother to the child while still *in utero*? The starvation treatment which is so successful in cases of maternal toxaemia is extraordinarily successful in a case such as the one described.

## STRANGULATION FOLLOWING REDUCTION EN MASSE (LEFT INGUINAL HERNIA): LAPAROTOMY: RECOVERY.

BY
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IN past years, when taxis was very frequently practised, a case such as the following was not regarded as uncommon. Nowadays it is rarely met with, because earlier operative measures are undertaken. The case is especially noteworthy in that the patient himself apparently performed reduction *en masse*.

C. G., aged 44, was taken ill suddenly on February 5th, 1917, with severe pain in the left iliac fossa and vomiting. The next day he felt better, and no vomiting occurred. The bowels acted properly on February 4th, and by enema on February 6th and 7th. On February 7th he vomited again, and complained

of severe pain in the same situation as on February 5th. There was no history of haematemesis, nor of melaena. The quantity of urine passed had been normal, and there was no information pointing to any disorder of micturition. On January 26th and January 28th he had experienced similar but slighter attacks of pain, which came on after snowballing. He stated that he had worn a double inguinal hernia truss for fifteen years. Three or four weeks before admission he said that he had found his left inguinal hernia down, and, after pushing it back himself, reapplied his truss.

On the evening of February 7th his pulse was 80, and the temperature 100.2° F. His tongue was thickly furred, and he looked sallow and ill. The abdomen was slightly distended. It was rigid, but the rigidity was not absolute. There was distinctly more resistance on the left than on the right. In the region of the lowest quarter of the left rectus there was a swelling the size of a tennis ball, which was extremely tender. The swelling was resonant on percussion; there was no dullness in the flanks. Small scybala could be felt in the rectum high up, and an ill defined fullness up towards the left iliac fossa.

Later in the evening of February 7th laparotomy was performed by Mr. John Everidge, F.R.C.S., through the sheath of the left rectus. The abdominal wall over the swelling was very oedematous.

Ten inches of small intestine were found strangulated in a large sac communicating with the general peritoneal cavity by a very narrow neck, which was deeply situated. The constricting ring and diaphragm of peritoneum were divided and the strangulated intestine was carefully examined. As it was found not to be viable, 14 in. of gut were resected. The upper and lower free ends of intestine being of very different sizes, a lateral anastomosis was performed. The abdomen was closed without drainage.

The sigmoid colon with its mesentery lay posterior to the swelling, which was situated immediately beneath the anterior abdominal wall and was pushing the peritoneum lining the left iliac fossa up towards the diaphragm.

The patient progressed most satisfactorily until February 13th when he passed by the rectum about a pint of dark blood containing clots. Hiccough developed but not to an alarming degree. On February 16th two severe haemorrhages from the rectum, each of about 1½ pints, occurred in the morning and evening respectively. No further operation was performed and the patient passed steadily into convalescence, and was finally discharged on March 17th.

During the after-treatment, when the bleeding occurred from the rectum, pituitrin was administered with the idea that it might stimulate the bowel to contract down on the bleeding point. There is no direct evidence that such was its action in improving the patient's condition, but the possibility of such a therapeutic use for pituitrin is worthy of note.

At a future date Mr. John Everidge hopes to perform an operation for radical cure of the patient's double hernia, when it will be easy to clinch the diagnosis of reduction *en masse*.

# Memoranda:

## MEDICAL, SURGICAL, OBSTETRICAL.

### A CASE OF HAEMATOCOLPOS IN BIFID UTERUS AND VAGINA.

On September 5th, 1916, I was asked by Dr. Cayet, of the civil hospital at D——, to see a French girl of 18 with a pelvic tumour. A week previously Dr. Cayet had been called in, as the girl was suffering from acute retention of urine, which he relieved by passing a rubber catheter. He observed that the girl was menstruating at the time.

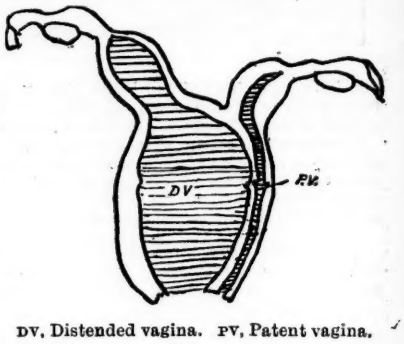
The patient told me that she had menstruated regularly for three years. Occasionally the loss was excessive—six or eight days. The retention of urine occurred for the first time during the last period. Constipation had given some little trouble.

On examining the abdomen, a hard nodular tumour could be felt rising above the pubes. It was not movable, not tender, and the abdominal wall could be made to slide over it. On rectal examination, the pelvis appeared to be almost filled by a smooth, immovable mass, rounded in outline. No uterus could be distinguished. The hymen was intact, admitting one finger. The vagina ran along the left side of the tumour, with which it seemed intimately involved. The cervix was out of reach.

Bimanually, tubes, ovaries, or uterus could not be distinguished.

Pregnancy was considered out of the question. The hard, rounded appearance suggested fibroid or semi-solid dermoid, but the inability to discover tubes or uterus was against the latter diagnosis. Operation was considered advisable.

I opened the abdomen near the mid-line (Battle's incision) and found what appeared to be a large fibroid of the uterus involving the whole of the body and cervix. The tubes and ovaries were perched on the summits of two nodules at the top of the tumour, which made it inadvisable to attempt to separate them and their blood supply from the tumour. The usual steps of separation of peritoneum and ligature of blood vessels were carried out. On cutting into the vagina, a gush of dark, sticky fluid took place, filling the pelvis. At the same time the tumour diminished considerably in size. The condition of haematocolpos was at once realized, but the operation was too far on to allow the uterus to remain. Having removed the tumour, the vagina was closed, peritoneal toilet performed, and the abdomen closed.



DV, Distended vagina. PV, Patent vagina.

The tumour, on examination, proved to be a completely bifid uterus. The right side vagina was closed at the orifice. The walls were extremely thick, almost half an inch. A small ridge marked the position of the cervix; the cervical canal and cavity of the uterus were also distended. The right tube was larger than the left, but not distended.

On the left side the vagina was narrow and the walls thin. A more distinct ridge marked the cervix. The cervical canal was narrow and elongated to about 3 in. The uterus was smaller than on the right side.

The patient made an uninterrupted recovery and returned home in three weeks.

Eight months later I examined the patient and found her general condition excellent. The patent vagina admitted a finger for 3 in., and no collection of fluid could be felt in the closed vagina. The accompanying diagram is drawn from the hardened specimen.

R. DOUGLAS LAURIE, Captain R.A.M.C.,
Honorary Surgeon, Derbyshire Hospital for Women.

### CINNAMON AS A PROPHYLACTIC IN MEASLES AND GERMAN MEASLES.

CINNAMON is a drug whose therapeutic virtues are not sufficiently recognized. The essence of cinnamon in 25-drop doses is one of the most effective remedies in cases of acute coryza. It is certainly much more efficacious as well as more pleasant than the popular ammoniated tincture of quinine.

Some years ago an article was published in the JOURNAL strongly advocating cinnamon as a preventive of measles. The writer stated that it was his practice, when he met with a case of measles, to prescribe a course of cinnamon for any unprotected children in the family. He stated that in most cases the child who was treated either failed to contract the disease or took it in a very mild form. I myself have had the same experience, but I was able to try the experiment only in a few cases, as I gave up general practice.

Recently I have had an opportunity of trying a course of cinnamon as a prophylactic in German measles. One of our nurses, who has charge of the most delicate children, developed a rash one Thursday afternoon. She thought little of it, and continued her duties, which included bathing and putting to bed a considerable number of young children. On the following morning the rash was more pronounced, but she did not go off duty until she was seen by me at 10 a.m. Before that she dressed a number of the children, and was therefore in close contact with them while in an infectious stage of the disease. I diagnosed the case as a very typical example of German measles. To make quite sure I telephoned to Dr. Sydney Smith, who informed me that German measles was very prevalent in the neighbourhood, and kindly called at the institution and confirmed my diagnosis.

I then ordered every child who had been exposed to infection (twenty in number) to have as much powdered cinnamon as would lie on a sixpence night and morning. The powder was administered in food, and the novel flavour seemed to be appreciated by the children. Whether *propter hoc* or merely *post hoc* it would be rash to say, but the fact remains that at the end of four weeks no second case of German measles had occurred. The cinnamon treatment was continued for slightly over three weeks.

German measles is not a serious disease, but it is certainly a great nuisance, particularly in an institution. The chief object of this note is to suggest that cinnamon ought to be fairly tried as a prophylactic not so much in German measles as in measles itself. The latter disease is responsible for such a large mortality that anything that promises to diminish either the incidence or the severity of the disease is well worth a trial.

W. B. DRUMMOND, M.B., C.M., F.R.C.P.E.,
Medical Superintendent, Baldovan Institution for the Feeble-minded.

## PROPHYLAXIS OF MAMMARY ABSCESS.

FOR the past two years I have administered potassium citrate to all my patients during lactation as soon as milk engorgement shows itself. The only cases which have gone on to abscess were two who did not come under my care until engorgement had passed on to definite abscess formation, but even these patients seemed to be improved by having the citrate. The *rationale* of the treatment is to make more fluid the thick stagnating milk. The addition of ammonium carbonate helps to keep the blood alkaline; the prescription I use is: ℞ Potass. citrat. gr. xv, ammon. carb. gr. iij, aq. chloroform. ʒ ij, aq. ad ʒ j; ʒ j four-hourly.

All my cases have responded promptly to this treatment, in the way of a free milk flow; and the child does not object to the citrated milk, but rather the contrary.

Southwark, S.E. REGINALD LARKIN, M.D.Lond.

## TONSILLECTOMY.

IN the discussions on tonsillectomy which occasionally appear in the BRITISH MEDICAL JOURNAL no reference has been made, so far as I have observed, to what I now look upon as by far the best method of performing this operation.

I have passed through all the stages of the old guillotine method, enucleation with the finger, enucleation with forceps, and sharp and blunt dissection, the method called in America after Dr. Sluder, but which as early was being performed in England by Sir StClair Thomson and others. I mean by the Sluder method that in which the guillotine is held reversed while the tonsil is pressed through the aperture, partly by pressure against the jaw and partly by the forefinger or thumb of the hand which does not hold the instrument, which is so blunt that it takes the line of least resistance behind rather than through the tonsil, from before backwards.

The operation which I wish to recommend is a modification by Beck of Chicago of this guillotine method. His instrument, which can be had from F. A. Hardy of Chicago, consists of a straight bar with the usual guillotine aperture, but within the ring of the aperture is a deep sulcus in which lies a hidden wire. With the patient on his back the ring is passed well behind the tonsil, the right first, while the handle is pressed down against the corner of the left side of the mouth till the instrument lies practically parallel to the table. At the same time the forefinger of the left hand, which I protect with a rubber finger for the sake of the anterior pillar, presses very firmly the tonsil through the aperture until the finger is itself inside the ring. The instrument is at the same time pulled forward in order to bring the distal side of the ring into close contact with the back of the tonsil. With the ring finger of the hand which holds the instrument, in this instance the right, or with the help of an assistant, a trigger is pushed forward with a light touch, when a catch holding the wire in position is loosened and the natural spring of the wire tightens it round the tonsil and also permits of the wire being pulled by the approximation of the right thumb and the first and second fingers which are already in rings for the purpose. When the wire has in this manner been tightly secured round the tonsil the trigger is replaced in its original position, and the tonsil, having been secured against falling into the throat by means of a pair of forceps, is cut off from behind forwards as slowly as desired by turning the ring in which the thumb has lodged during the previous steps of the operation.

After having for a couple of years done most of my cases by the Sluder method, I have recently ceased to do anything else than that here roughly described, and I feel certain that nearly every one who has once "got the hang of it" will agree with me that it is by far the most satisfactory. Its merits are that it is easy; that it is the most nearly bloodless method; that it gives the slightest reaction; that it is applicable to the worst cases of imbedded tonsil; that practically any tonsil can be removed by it except such as are held down by old firm adhesions for which no method is easy; that it is very rapid; and that if the surgeon will avoid wounding them with his finger-nail the pillars are safe. Another advantage is that it is hardly likely that a styloid process projecting into the tonsil—of which many have been seen since I first wrote about this anomaly I think some twenty years ago—could be missed before the wire is tightened. The rings are of three sizes, of which the middle is the most useful.

A. W. STIRLING, M.D., C.M.Edin., F.A.C.S.
Atlanta, Georgia, U.S.A.

## THE ECONOMICAL USE OF COCAINE.

IN view of the present high price of cocaine it is important to avoid waste in its use. As usually employed for local anaesthetic purposes it is applied in solution on lint or cotton-wool, a considerable proportion remaining on the latter and being thereby wasted.

Moreover, solutions of the drug, if they have been long made, are untrustworthy, and not infrequently have to be discarded.

For some years I have used glycerin of starch (glycerinum amyli *B.P.*) as a vehicle for the local application of cocaine, and with entire satisfaction, and can recommend it as the most economical. It has the following good points:

1. It keeps indefinitely, does not evaporate nor dry up. I have by me the remains of a supply made five years ago and it is as active as ever.
2. It can be applied to skin or mucous membrane without wool or lint. Simply spread it over the surface as thickly or thinly as desired.
3. It is very absorbable.
4. It can be prepared of any strength, cocaine being soluble in glycerin of starch in practically any proportion.
5. It is as convenient to handle as an ointment, but without the latter's greasiness.

By cocaine I mean the hydrochloride. The alkaloid itself is insoluble in glycerin preparations.

Stoke Prior, Bournemouth. J. T. HALL, L.D.S.

## A CASE OF SECOND INFECTION OF SYPHILIS.

A LEADING seaman, aged 32, was examined for submarine service on December 18th, 1915, and found fit. This examination is extremely thorough, and any suspicion of venereal disease automatically renders a man unfit.

In February, 1916, he contracted syphilis, a hard sore appearing five weeks afterwards on the dorsum of the penis; upon April 10th, 1916, he presented himself for treatment. The sore was a typical one, and accompanied by enlargement of the left inguinal glands. On April 17th he was given 0.4 gram of galyl intravenously. That night his temperature rose to 102.4°; he vomited once and complained of headache; the temperature was normal the next morning. On May 17th his blood gave a strong positive Wassermann reaction. On May 27th he was given his second injection of galyl, and his reaction temperature rose to 99°; there was no headache or vomiting. On July 8th a third injection of 0.4 gram of galyl was given, and there was no reaction whatever. Between the first and second injections he was given three injections of 1 grain of mercury each, intramuscularly; these were repeated between the second and third injections of galyl. On November 18th his blood gave a "faintly positive" Wassermann reaction; he was therefore given eight further injections of mercury, each 1 grain, at intervals of one week, beginning on November 22nd, 1916, and ending on January 11th, 1917. He had never shown any secondary

symptoms, and his sore with the enlarged inguinal glands vanished after the first injection of galyl.

In March, 1917, he again exposed himself to infection, and on April 14th, 1917, he came under my care. Upon admission there was on the dorsum of the prepuce a large typical hard sore. The scar of the old sore was easily visible as some of the gland tissue had been destroyed. He has been given three further injections of galyl—the first, 0.25 gram, on April 15th; the second, 0.35 gram, on April 22nd; the third, 0.35 gram, on April 30th. It is my intention to give him three more injections of 0.35 gram, making a total of 2.0 grams, spread over six weeks. His sore healed rapidly. On April 30th it was a clear scar, and there was no inguinal gland enlargement.

Each injection involves forty-eight hours' absence from full duty, after which he carries on his ordinary work until the next one falls due. I wish to put this case on record as an undoubted second infection of syphilis. The records of all naval sick are carefully made and preserved, and it is from these, and in no instance from the patient's statements, that I have given such facts and dates as have not come under my own personal observation.

L. C. Dundas Irvine, B.A.Cantab., M.R.C.S.,
Surgeon R.N.V.R.

# British Medical Association.

## CLINICAL AND SCIENTIFIC PROCEEDINGS.

### DORSET AND WEST HANTS BRANCH.

The annual meeting of the Dorset and West Hants Branch was held at Blandford on May 16th.

*The Diagnosis of Scarlet Fever.*

Dr. T. Howard delivered the presidential address entitled "The diagnosis of scarlatina." He said that the textbooks dealt with the differential diagnosis of scarlet fever from a negative standpoint only. The feeling of disappointment, when the textbook was consulted, was mainly due to the exalted position which the rash occupied in the mind as a factor in diagnosis. Diagnosis was often decided by the knowledge that other cases exist in the neighbourhood, or the personal factor turns the scale. Dr. Howard pointed out the danger of removing to hospital cases which were improperly diagnosed. Peeling was accepted by the great majority of medical men as a sure proof of the disease being scarlet fever; but unless desquamation was defined, it was a great source of error. The scarlatinal rash was readily imitated, and desquamation was common to many conditions, which were mentioned; but a peeled scarlatinal tongue was practically pathognomonic. The mild unsuspected cases that originated some epidemics might be left out of consideration since they were on a par with the "carrier" cases of diphtheria. In the absence of bacteriological tests, it was the more necessary to have a clinical group of symptoms to use as a criterion. The differential diagnosis from rubella (more particularly that form in which the symptoms were pseudo-scarlatinal, and the desquamation sometimes pseudo-scarlatinal, as in "Duke's fourth disease") was discussed. The difficulty of the general practitioner in making a diagnosis, when called upon to do so in a doubtful case, was emphasized. It was argued that, before he committed himself to a diagnosis, he should wait twenty-four hours in order to find out whether the fur on the tongue was being shed. Where the "white strawberry" condition persisted, the danger of attributing the persistence of furring to the septic condition of the throat was a very real one.

Mr. W. H. L. Marriner proposed a hearty vote of thanks to the President for his paper. This was seconded by Dr. Weaver, of Yeovil, who drew attention to the value of Leede's sign in the diagnosis of scarlatina and described shortly the method of carrying it out.

*Sea-water Plasma.*

Dr. Mahomed then made some remarks on the value of sea-water plasma, which he said was brought into notoriety some years ago as a cure for summer diarrhoea in children. M. Quinton recommended the injection of sea-water diluted with sterilized water so as to make it of a valency he considered identical with that of the ocean from which the primordial protoplasm evolved the beginnings of animal life. Shortly afterwards, in 1911, Dr. Robert Simon described the technique and gave plates showing the great improvement effected in cases of very chronic skin disease, such as psoriasis nummulata, lichenoid eczema, etc., by this treatment. The sea-water used was obtained at a depth of about 50 ft. twenty miles from shore; it was diluted, sterilized by filtration, and retailed in sealed ampoules. Dr. Mahomed decided to try and sterilize water obtained in the neighbourhood. It was full of the bacteria of degeneration; but by packing a percolator with boiled cellulose wadding so that the water filtered through very slowly, the filtrate was sterile. To prevent shock it was best to warm the filtrate before putting it in the container. The latter should be of glass and graduated, tapering at the lower end to receive a rubber tube and stopcock. A platinum needle should be used, as steel needles rusted quickly when exposed to sea-water. Dr. Mahomed usually began with half an ounce, and went on to two ounces. He described three cases of neurasthenia treated with sea-water injections. The beneficial effect appeared to be different from and greater than that obtained by saline injections. There was no doubt that sea-water was slightly radio-active, presumably due to the washings from rocks, clays, and sludges from estuaries. Hence water collected near the coast should be more active than that obtained at a distance. Dr. Mahomed finally described his experiments with radio-active mud from Poole Harbour.

In the course of the subsequent discussion Dr. Weaver suggested that ordinary saline solution was equally useful, and that the improvement in neurasthenic cases was the result of a mental effect.

# Reports of Societies.

## HALLUCINATIONS IN THE SANE.

At a meeting of the Medico-Psychological Association of Great Britain and Ireland in London on May 15th, when the president, Lieutenant-Colonel David G. Thomson, M.D., R.A.M.C., was in the chair, Dr. Robert Hunter Steen, Medical Superintendent of the City of London Mental Hospital, read a paper on hallucinations in the sane. He made two main divisions of his subject: (*a*) Hallucinations the result of agencies operating upon the brain or nerves; (*b*) those of mental origin. Among the former were toxins, both exogenous and endogenous, disorders of brain circulation, disease of end-organs, after images, and brain diseases of obscure pathology, such as epilepsy and migraine. The second category consisted of cases in which, so far as present knowledge went, a physical agency was unknown. They included suggestion, hypnotism, crystal-gazing, clairvoyance, hysteria, somnambulism, multiple personality, hypnagogic visions, dreams, hallucinations in history, collective hallucinations, so-called telepathy, and hallucinations the result of a complex. De Quincey had described how the abuse of opium could produce hallucinations, and the late Sir Lauder Brunton had given a good example of sodium salicylate producing the same effect on a patient. The drugs which might produce this effect included alcohol, absinthe, ether, stramonium, belladonna, hyoscyamus, nitrous oxide, chloroform, mercury, lead, and santonin. A narrow escape from drowning might cause hallucinations, as in the case of a man who accidentally fell into the water and was almost drowned. After being rescued, he continued in a state of apparent death for twenty minutes, and after restoration described his sensations as most delightful and ecstatic, to the accompaniment of music. Apoplexy had sometimes been heralded by hallucinations. Instances from general and scientific literature and from experiences with patients were given of most of the varieties set out. The author's view was that hallucinations did occur in the sane, and cases met with in the sane should be intensively studied, as the subjects were of undimmed intelligence. This study was especially necessary in borderland or hysterical cases. There seemed no reason to think that hallucinations in the sane differed from those in the insane; and as in the sane hallucinations could be produced by toxins, probably these acted in the insane, too. They could also, however,

occur independently of physical changes. He thought it probable that hallucinations in the insane could be best studied from the psychological rather than the physiological standpoint. In every case presenting hallucinations, he considered that some process of dissociation was at work, an opinion supported, he thought, by the fact that hallucinations were met with in cases of multiple personality.

## PHYSICAL TREATMENT OF DISABLED SOLDIERS.

AT the annual meeting of the Section of Balneology and Climatology of the Royal Society of Medicine, held on May 24th, the Council's report for the session, 1916–17, was presented. This stated that the membership of the Section is now 238. At the meeting on November 9th, 1916, a symposium was held, at which were heard the personal experiences of Dr. Quiserne, Director of the Annexe of the Grand Palais Hospital in Paris. All the meetings were well attended.

The special committee of Council, now called the War Disablement Committee of the Section of Balneology and Climatology of the Royal Society of Medicine, was active during the session; a report by the honorary secretaries was presented at the meeting. This recorded that the Physical Clinic for the Treatment of Disabled Officers was opened at 126, Great Portland Street, W., on July 3rd, 1916. After a meeting held on July 22nd, a subcommittee was appointed to prepare a summary of the views of the committee on physical treatment for disabled soldiers, which was published. On October 2nd the Physical Clinic in Great Portland Street was taken over by the British Red Cross Society, and is now called The Red Cross Clinic for the Physical Treatment of Disabled Officers. Discussions on physical treatment for disabled soldiers were held, and on February 14th, 1917, Dr. FORTESCUE FOX described his visits to the centres of physical treatment in the British Isles and Northern France.

# Reviews.

## VULVO-VAGINITIS IN CHILDREN.

IN this country vulvo-vaginitis in childhood is most often sporadic. In America, however, matters are otherwise, and in schools, institutions, and hospitals for children, the infection occurs in epidemic form not rarely. An elaborate report on the occurrence, prevention, and treatment of the disease has recently been published[1] by a committee of members of the American Pediatric Society. It appears to be the case that the gonococcus is the infecting agent in perhaps three-quarters of these patients. But from the work of Pearce (1915) on the agglutination and complement-fixation reactions of the gonococcus it seems that two principal types of gonococci may be recognized, corresponding to the infantile and adult types of infection with the gonococcus seen clinically; and, for one reason or another, the infection is less dangerous to children than it is to adults. Possibly the gonococcus met with in the vulvo-vaginitis of children is less virulent than that infecting adults, or it may be that the young enjoy a higher power of resistance to the organism. Be that as it may, it appears that in 1914 sixty-four children under 10 years of age died of gonococcal infection in America, out of over sixty million of the inhabitants. It is held that most of these sixty-four deaths followed infection through the vaginal route.

The committee has discussed, and in great measure confirmed, a number of resolutions dealing with the prevention and treatment of this form of vulvo-vaginitis. It was held that cities should be required to provide adequate hospital and dispensary facilities for the care and treatment of children with the disease, and it is noted that six American hospitals now have a special ward for patients with vaginitis—that in the Philadelphia General Hospital has fifty-two beds, with a special staff, and is permanently in quarantine. It was held that all children with the disease should be excluded from school until they could obtain a medical certificate to the effect that they had been free from the discharge for a period of three weeks; the instance of a school with an epidemic of 100 cases of the infection is quoted in support of this recommendation. It was advised by the committee that matrons should be placed in charge of the girls' toilet rooms in the public schools, and further that toilet seats embodying the principle of the U-shape should be used in all schools; these are the chief measures proposed for preventing the transmission of infectious vaginal discharges. The committee states that facilities must be provided for making the necessary bacteriological examinations of smears and discharges, and sketches a campaign for the education of school teachers, school nurses, and mothers in the subject of this form of vulvo-vaginitis in children. It is proposed, too, that asylums and day nurseries for children should not be licensed unless they provide adequate facilities for the detection of the disease, and exclude all infected children. As for children's hospitals, the committee holds that separate wards should be provided for children with the disease; to treat them in general wards without danger to the other patients was thought impracticable. Indeed, the committee goes further, and would not admit any girl to a general ward in a hospital until bacteriological examination has shown that she is free from vulvo-vaginitis, and a further recommendation is made to the effect that repeated (even daily) examinations of the girl patients should be made for the presence of any discharge. Spray baths are recommended in place of tub baths in hospitals; nursing, care, and supervision are to be given to cases treated in their own homes; and all cases of the disease should be voluntarily reported to the local health officer.

In a paper on epidemic vaginitis in children, printed in the same volume of *Transactions*, Dr. B. K. RACHFORD remarks that the nurses in charge of them very rarely contract the infection from children, and that it is very rarely acquired by the children through sexual contact. The disease, he says, lasts for from six weeks to six months in children, and but rarely has severe complications or sequelae. As for treatment, a wide experience has led him to conclude that the best is local treatment, daily irrigation of the parts with two quarts of normal saline, followed by the injection of two or three ounces of a 1 per cent. solution of silver nitrate. He believes that the intractability of these cases in hospitals is due to reinfection. It is, of course, obvious that special precautions on the ordinary lines should be taken in the management of all cases of vulvo-vaginitis, wherever treated, to prevent the transmission of the infection to other children.

[1] *Transactions of the American Pediatric Society.* Twenty-eighth Session, held at Washington in 1916. Edited by Linnaeus Edford La Fétra, M.D. Vol. xxviii. (Med. 8vo, pp. xiv + 338.)

## JOINT AND MUSCLE INJURIES.

CAPTAIN ROWLEY BRISTOW'S book on the *Treatment of Joint and Muscle Injuries*[2] would have been welcome at any time, but its appearance is especially appropriate at the present moment when a determined and persistent effort is being made to obtain official recognition for certain bonesetters. For Captain Bristow shows that he and other surgeons have improved on the methods of these persons and are successfully employing manipulative surgery, as it is called, guided by scientific skill and knowledge. But his book does more than this, for in it is to be found an exposition of the valuable method of treatment of weak and injured muscles by graduated contraction, which was shortly described in a paper in the *Lancet* in 1912 by Dr. Morton Smart and himself. It is a truism that the active contraction of any muscle is far more effective as a stimulant to recovery of power than any kind of massage, but in many cases of joint injury or of muscle strain voluntary effort is wanting, and electric stimulation by the ordinary faradic current, if strong enough, is too painful to be borne. The substitution for the usual induction coil of the specially wound and arranged coil which Captain Bristow describes and figures, obviates this difficulty, and by its use painless contractions resembling the normal action of the muscle can be obtained, and the restoration of muscle power and tone can be

[2] *Treatment of Joint and Muscle Injuries.* By W. Rowley Bristow, M.B., B.S.Lond., F.R.C.S., Captain R.A.M.C.(T.). London: Henry Frowde, and Hodder and Stoughton. 1917. (Demy 8vo, pp. xii + 148. 6s. net.)

encouraged. Acute sprains are not always treated seriously enough, and not always is a diagnosis made between sprain and fracture. It would be a good rule to submit every acute sprain to the *x* rays, for, as the author points out, small unsuspected fractures are often detected by this means, and the treatment suitable for sprain is unsuitable for fracture. The chapter on chronic sprains, which deals among other matters with "bonesetting," contains much that is instructive, and which, if taken to heart by the profession, would prevent the occurrence of those cases in which the bonesetter triumphs over the surgeon. It is incredible that a loose and slipping semilunar cartilage can be fixed by any manipulation by the bonesetter; but it is probable that cases in which there are small adhesions in or about the joint, following synovitis, may be thus cured. As Captain Bristow points out, such cases of internal derangement of the knee are sometimes mistaken for cases of loose cartilage, and operation advised or undertaken. He reaffirms in this connexion the importance of rotary movements, as well as those of flexion and extension when breaking down adhesions. The maxim of the bonesetter Hutton, "the twist is the thing," should be borne in mind. Chronic sprains are often accompanied or followed by wasting and loss of tone of muscles, for which the method of graduated contractions offers a valuable means of treatment, with or without massage. There is useful information and sound advice in this book on the after-treatment of peripheral nerve injuries, on fractures, dislocations, and on massage, and it is well illustrated.

Dr. VICTOR HECHT'S guide to the after-treatment of the wounded[3] is a handbook of instruction in the non-operative treatment of contractions and disabilities following war injuries. It makes no pretence to be more than this; it is fully illustrated, and contains much that is necessary for instruction. A feature which is novel, but of doubtful value, is the demonstration of massage of various muscles on the dissected subject. In an appendix an account is given of the installation and organization of a mechanico-therapeutic station, communicated by Dr. Hecht to the meeting of the German Union for the Care of Cripples in Berlin in February, 1916.

## ARTIFICIAL PNEUMOTHORAX.

DR. CLIVE RIVIERE has written a very useful short book on the *Pneumothorax Treatment of Pulmonary Tuberculosis*.[4] The contributions on this subject scattered throughout the medical press of the world can already be counted by the hundred, and some bulky monographs have been published in Italian, Danish, and German. But in this country there has hitherto been no comprehensive review of this treatment—a serious omission, considering its striking merits. As Dr. Riviere says: "This, indeed, is the rôle of artificial pneumothorax, to rescue those formerly beyond the bounds of human aid, to restore the lost to life." And again: "It is to the 'lost' case of phthisis that pneumothorax treatment offers a chance of life and recovered health." Dr. Riviere crams a mass of useful information into small space, yet, being comparatively immune from the hackneyed jargon of the medical textbook writer, he treats his subject with a literary touch. In his anxiety to acknowledge the contributions of other workers he introduces a host of names the overwhelming majority of which will add no weight to the argument in the mind of the reader. A Norwegian surgeon, the author of a treatise on scrofulosis, once took to Vienna several copies of his book for presentation to his fellow specialists. Their first and inevitable query was: "Sind wir darein?" and their interest waxed or waned according to the answer. Judged by this test, Dr. Riviere is assured of a warm reception in the habitations of the minor prophets; they are all "darein." They jostle each other throughout the book, obscuring the true pioneers, Forlanini, Murphy, Saugman, and Brauer. Dr. Riviere may rest assured that readers will prefer his views to those of the obscure writers he so frequently quotes. The chapter on the accidents that may occur in the course of this treatment is particularly instructive and should impress the beginner with the risks of sudden death run by the victim of the careless or ignorant operator. It is a matter for congratulation, as well as reproach, that the overwhelming majority of the fatalities from this treatment could be traced to faulty technique; the author's comments on page 30 on an unpardonable blunder in technique might well have been pointed with the vigour of unparliamentary language.

[3] *Leitfaden der physikalisch-therapeutischen Nachbehandlung Kriegsverwundeter (Massage, Heilgymnastik, Apparatbehandlung, Thermo- Hydro- und Elektro-therapie).* Für Aerzte, Studierende und Aerztliches Hilfspersonal. Von Dr. Victor Hecht. Vienna and Leipsig: Wilhelm Braumüller. 1916. (Demy 8vo, pp. xvi + 260; 178 illustrations.)

[4] *Pneumothorax Treatment of Pulmonary Tuberculosis.* By Clive Riviere, M.D., F.R.C.P. Oxford Medical Publications. London: Henry Frowde, and Hodder and Stoughton. 1917. (Pp. 186; 10 illustrations, 2 plates. 6s.)

## NOTES ON BOOKS.

THE trustees of the Natural History Museum have recently issued three very useful and comprehensive pamphlets; one of them, by Mr. F. W. EDWARDS, B.A., assistant in the department of entomology, deals with *Mosquitos and Their Relation to Disease.* It contains an account of the life-history of the most important varieties, with details of those known to be concerned in the conveyance of disease, together with brief notes on identification. Another pamphlet by Mr. STANLEY HIRST, assistant in the department of zoology, on *Arachnida and Myriopoda*, describes many creatures, including scorpions, spiders, mites, ticks, and centipedes, injurious to man. It ranges from such relatively harmless parasites as *Demodex folliculorum*, through the itch mite, to *Ornithodoros moubata*, the tick which transmits the relapsing fever of tropical Africa. The third pamphlet, by Mr. BRUCE F. CUMMINGS, assistant in the department of entomology, describes the anatomy, development, and habits of *The Bed-bug*, an animal which appears to possess no redeeming feature. It is ugly, it has an offensive smell, it is rapacious, it carries plague, and is shrewdly suspected of conveying also relapsing fever, kala-azar, tuberculosis, and perhaps poliomyelitis. All three pamphlets are well illustrated, and the price—that on the bed-bug, 1d. (postage ½d.); on mosquitos, 1d. (postage ½d.); on scorpions, etc., 6d. (postage 1d.)—places them within the reach of all.

The stammerer is a source of distress both to himself and to his hearers, and whoever reduces the number of the afflicted or improves in any way the treatment of the affection will indubitably gain the thanks of many. Dr. ASH has written a little book entitled *Stammering and Successful Control in Speech and Action.*[5] It is written for the layman, and "is intended to be a practical guide for the assistance of those unfortunate persons who through weakened control in speech or action suffer the tortures of stammering and the discomforts of various tricks of voice and manner." The book is very simply written and should be understood by any reasonably intelligent layman. It seems, however, unduly prolix, particularly in the earlier chapters; the disquisition on control in general takes a great deal too much room, and seems to crowd out the essential chapters on the treatment of the particular affection. The directions for self-treatment and exercise in speech are clearly and simply set out. The scheme would scarcely fit the case of a child, and it is most desirable to be able to check in children the beginnings of the disorder. With reference to the attempt to benefit the condition by psycho-analysis, not much hope of benefit is held out—in the author's words, "the optimists themselves have always pointed out that at best it inevitably takes a very long time."

In the issue of the *Western Front*[6] for June Mr. MUIRHEAD BONE takes us back to France and shows us some of the ground over which recent fighting has taken place. We have, for instance, a distant view of Vimy Ridge, two others of Lens smoking in the distance, and one of the Loos salient. He gives also a sketch of the site of Thiepval Château, in which the most conspicuous feature is a hole in the foreground admitting to the cellars. There are several sketches of the ruins of Peronne and a striking drawing of the wrecked railway bridge over the Somme.

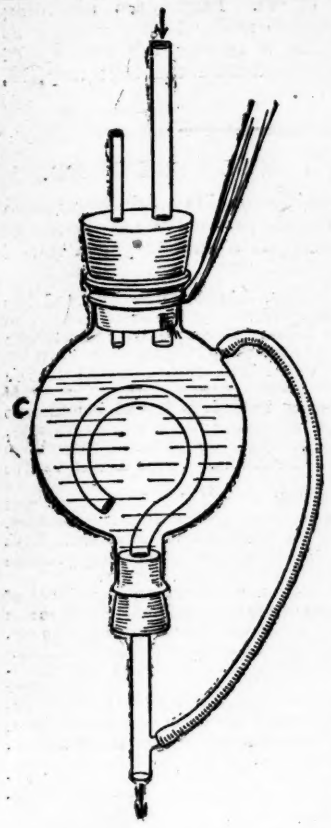
[5] *Stammering and Successful Control in Speech and Action.* By E. L. Ash, M.D.Lond. London: Mills and Boon, Ltd. 1916. (Post 8vo, pp. 116. 2s. 6d. net.)

[6] *The Western Front.* Part I, volume 2. Drawings by Muirhead Bone. Published for the Government by *Country Life*, Ltd. (2s. net monthly.)

## MEDICAL AND SURGICAL APPLIANCES.

*An Automatic Nurse for Carrel-Dakin Fluid.*

IN order to secure an automatic feed of the Carrel-Dakin fluid to the tubes laid in a severe case of gunshot wound a method of siphonage has been in use for some months at Bethnal Green Military Hospital.




At first the apparatus was made of tin, but corrosion took place and the tubes became blocked; finally, a small glass bulb, having a circular siphon within, as shown in the diagram, was completed, and with it the flushing action is automatically and aseptically carried on as often as is required.

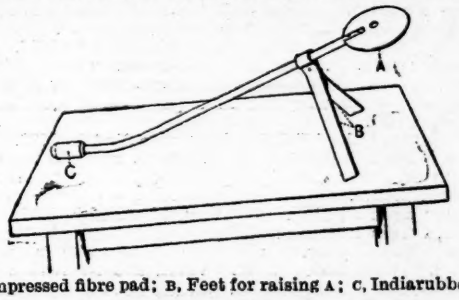
When this is used, the nurse sees that the cistern above the siphon bottle is well supplied and that the regulating clip on the feed tube to the siphon bottle is so adjusted as to only allow the fluid to enter it at a rate which will ensure its removal, say, every two hours.

The side connexion between the globe and the efflux tube is found valuable if an "air-lock" prevents the fluid being discharged. Thus, if an air bubble gets into the curve of the siphon, it may prevent automatic outflow; the fluid then rises higher in the globe and pours down the side track; as it enters the efflux tube it creates a suction, like a Sprengel-pump action, and the siphon at once empties.

The siphon bottle is valuable in saving nurse-power; it is cheap and was originally made by Bell and Croydon, 50, Wigmore Street, on a model prepared by Lieutenant-Colonel Hurry Fenwick.

*A Page-turner for Armless Patients.*

Dr. A. E. SHIPLEY, Master of Christ's College, Cambridge, writes: One of the great difficulties with which men who have lost both hands have to contend is turning over the leaves of books. I have, with the aid of Captain C. G. M. Hatfield, of the 18th Middlesex, and Mr. Barker, of the Engineering Laboratory, devised a small instrument, one end of which is held between the teeth and the other




A, Compressed fibre pad; B, Feet for raising A; C, Indiarubber cap.

—which is provided with an indiarubber cap—is pressed against the leaf, and with a little practice the leaf can be readily turned over. The instrument is raised on two diverging feet so that one end is lifted off the level of the table and can be easily picked up by the mouth. The metal work is aluminium and the pad for the teeth is made of compressed fibre. These instruments may be obtained of Messrs. S. Maw, Son and Sons, 7–12, Aldersgate Street, London, E.C.1, price 3s. each.

THE second medical congress of Ecuador will be held at Quito from August 1st to 15th, 1917. The first was held at Guayaquil towards the end of 1915.

## MEDICAL RESEARCH COMMITTEE.

THE ANTISEPTIC "FLAVINE" (ACRIFLAVINE).

THE following has been officially communicated to the lay press:

The incomplete statements which have appeared from time to time in the press with regard to the antiseptic "flavine" have necessarily led to some misapprehension of the situation by the public. The impression has been created that flavine is a substance of magical potency which can cure infected wounds, and that there has been an unnecessary delay in making supplies of it available for general use. It should be realized that no antiseptic, even a theoretically ideal antiseptic when that is obtained, can ever be more than an adjunct to skilled and thorough surgery. Flavine must be thought of accordingly in relation to the other new antiseptics which have been brought into successful use during the course of the war.

These fall into two main classes. One depends upon the use of chlorine compounds, as in the well-known "eusol" introduced by Edinburgh workers, the similar "Dakin" solution, and the more recent chloramine-T, introduced by Dr. Dakin from the Leeds laboratories. These have wide use in our armies and are now known all over the world. The researches from which these arose and which are still in progress have all been supported from the beginning by Government help through the Medical Research Committee. The second class, to which flavine belongs, includes the elaborate compounds of which most are brilliantly coloured and are used as dyes. From the first month of war special researches have been made among these on behalf of the Research Committee for unrecognized antiseptics of high value. Work at Haslar and at the London Hospital for the Committee showed very early the value of malachite green, and this is giving valuable routine results in naval hospitals and elsewhere. When it was desired to investigate flavine, which was a little known but patented German dye, none was available in this country, and its manufacture requires highly skilled and laborious work. The Committee, however, caused a supply to be specially made in their biochemical department for investigation by Dr. Browning at the Bland-Sutton Institute. His results were first published in January, 1917.[1] Three months previously, however, as a result of the first preliminary experiments, the Committee arranged that preparation should be made for the difficult processes of commercial manufacture, and all the scientific information at their command was made freely available. As a result of this early action they were able to supplement their own supply in use for the experiments and the first clinical trials by a large number of samples, which were sent in April to a selected group of consultant surgeons to the forces, and other responsible surgeons, for the purpose of securing official reports for the guidance of the Admiralty, the War Office, and civilian institutions, whose action could not rest upon any single testimony or any small-scale supply of the antiseptic. It is already clear that the special uses of flavine for particular purposes have still to be carefully defined in relation to other antiseptics and to the operative methods of surgery, to which it can at best only be a valuable aid. While this concerted official study is in progress two or three firms are already preparing for commercial supply to the public. Under our patent law it has been necessary for them to procure licence to manufacture from the Board of Trade. The hearing of applications for licences has already taken place, and it is hoped that licences to manufacture will very shortly be issued by the Board. It is proposed that all the manufacturing firms shall use one and the same name for the substance—a condition which will restrain any firm from securing monopoly privileges by wide advertisement of a fancy name. The Medical Research Committee have proposed for important technical reasons that the substance shall be officially called "Acriflavine" in this country. This will avoid the German name, "Trypaflavin," which is registered as a trade mark, and prevent confusion with an existing vegetable dye already called "Flavine." No doubt the firms concerned will announce at the earliest moment their readiness to supply acriflavine commercially.

During the progress of this work the Committee have more recently put at Dr. Browning's disposal for study a

[1] BRITISH MEDICAL JOURNAL, January 20th, 1917, p. 73.

compound closely allied to acriflavine, which already appears to have identical or even superior properties, and if this be confirmed it will be easier to manufacture, and cheaper for the public. This substance will be officially known as "Proflavine." An early scientific publication will be made on this subject.

The degree of Government support which has been given from the beginning to the researches upon acriflavine and other antiseptics has not always been made a matter of public knowledge. It is proper that financial and scientific help given officially should not diminish in any way the credit due to individual scientific workers or scientific institutions.

## BIRTHDAY HONOURS.

IN addition to the long list of nominations to, or promotions in, military orders, published at p. 780, the King on the occasion of his birthday conferred the following honours:

*To be a Baronet.*

Dr. Frederick Taylor, President of the Royal College of Physicians of London.

*To be Knights Bachelor.*

Thomas Kennedy Dalziel, Lecturer on Clinical Surgery in the University of Glasgow and Surgeon to the Western Infirmary, Glasgow.

Colonel Robert Jones, C.B., A.M.S., Inspector of Military Orthopaedics.

Herbert F. Waterhouse, F.R.C.S., Surgeon to Charing Cross Hospital and Dean of the Medical School.

Surgeon-General Eugène Fiset, M.D., C.M.G., D.S.O., Deputy Minister of Militia and Defence, Canada.

Dr. Edward Charles Stirling, C.M.G., Professor of Physiology in the University of Adelaide, for his services to science in Australia.

*To be C.B.:* Lieutenant-Colonel Charles Arthur Johnston, M.B., D.S.O., I.M.S.

*To be C.S.I.:* Colonel Hormasjee Eduljee Banatvala, I.M.S., Inspector-General of Civil Hospitals, Assam.

*To be C.I.E.:* Lieutenant-Colonel John Anderson, M.B., I.M.S.(ret.), member of Medical Board, India Office; Lieutenant-Colonel David Waters Sutherland, M.D., M.R.C.P., F.R.S., I.M.S., Principal, Medical College and School, Lahore, Punjab; Captain Harold Hay Thorburn, I.M.S., serving with the South Persia Rifles, Shiraz.

*To be C.M.G.:* Mr. Thomas Hood, Director of the Medical and Sanitary Service, Nigeria; Dr. Frederick Truby King, Medical Superintendent, Seacliff Mental Hospital, New Zealand.

*To be C.V.O.*—Mr. Richard Robert Cruise, F.R.C.S., Ophthalmic Surgeon to King Edward VII Hospital for Officers.

*The Kaisar-i-Hind Gold Medal* has been awarded to Dr. Behari Lal Dhingra, Chief Medical Officer, Jind State; Lieutenant-Colonel Kanta Prasad, I.M.S.(retired), of Rangoon; and Captain Robert Henry Bott, M.B., F.R.C.S., I.M.S., Professor of Surgery, Medical College, Lahore.

## SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual report presented to the Society for the Relief of Widows and Orphans of Medical Men on May 18th showed that the invested capital of the society amounted to £140,000, and that £4,223 was distributed among forty-eight widows and nine orphans in receipt of grants. The fund provides on an average grants of £50 per annum for widows who also receive from the Brickwell Fund £25 and £10 per annum, if over or under 65 years of age, respectively; orphans receive £15 per annum from the same fund. The Copeland Fund further allowed a grant of £30 per annum to orphans over 16 years of age if suffering from any disability that prevented them earning a livelihood. The Brickwell Fund furnished further special grants to enable orphans to remain longer at school or to enter the medical profession or start in some other career. The working expenses amounted to about 4½ per cent. of the income. While nearly 7,000 medical men were eligible, the membership of the society was barely 300. The President, Sir Alfred Pearce Gould, in his address, urged young medical practitioners to join the society, the annual subscription to which was two guineas, and thus feel that, whatever happened, their widows would not be left penniless. As an example of the great advantages of the society, the report cited the case of the widow and five children of a member, who had paid subscriptions amounting to £16 16s., receiving grants amounting to £200 per annum. Certain alterations in the by-laws were adopted, including one by which the annual subscription will be increased in the case of medical men who join the society after reaching the age of 40. Particulars regarding membership, which is limited to medical men residing at the time of election within a twenty miles radius of Charing Cross, can be obtained from the Secretary, 11, Chandos Street, London, W.1.

## ROYAL MEDICAL BENEVOLENT FUND.

AT a meeting of the Committee on May 8th twenty-five cases were considered, and £213 granted to twenty-one of the applicants. The following is a summary of a few of the cases relieved:

Wife, aged 56, of M.R.C.S.Eng. Applicant's husband has been paralysed for twenty-eight years, and the little income he has is insufficient to support them. The wife prior to the war was able to earn as a teacher of music and languages, but cannot obtain pupils at present. Voted £15, and referred to the Guild.

M.R.C.S.Eng., aged 74. Owing to ill health and insufficient means, and the increased cost of living, unable to pay his way. His wife has recently broken her leg. Only income about £100 a year from son and friends. Rent £25. Voted £18 in twelve instalments.

Widow, aged 67, of M.R.C.S.Eng. who died in 1904. Applicant lost the small capital she had through fraudulent executors. Only income now 11s. per week provided by relatives. Pays 5s. 6d. per week rent, and high price of food makes it impossible for her to manage. Voted £12 in twelve instalments.

Widow, aged 46, of M.R.C.S.Eng. who was an annuitant of the Fund. Applicant left without means, and health very much impaired by constant nursing of her husband for eight years. She hopes after a rest to find suitable employment. Voted £5.

Widow, aged 58, of L.R.C.P.Edin. who died in 1902. Applicant was left unprovided for with a young daughter, now aged 19. Both have recently obtained work through the Manchester branch of the Guild, and the prospects are brighter, but they still require a little help to straighten their affairs. Relieved four times, £40. Voted £5.

Widow, aged 41, of M.D.Glasg. who died in 1910. Left entirely without means, and has defective eyesight. In the summer she earns 15s. a week as an attendant. In the winter months has casual employment only. Health very indifferent lately. Relieved twice, £20. Voted £10 in two instalments.

Daughter, aged 62, of L.S.A.Lond. who died in 1874. Owing to ill health and advancing years unable to undertake permanent work. Friends allow her £25 a year. She earns about £5 by sewing. Relieved eleven times, £100. Voted £15 in twelve instalments.

Widow, aged 45, of L.S.A.Lond. who died in 1915. Was left entirely without means with three children. The daughter, now aged 17, is being educated by the Guild. Applicant had post as working housekeeper, but has recently had to give this up. Relieved once, two years ago. Voted £10 in two instalments.

Widow, aged 63, of L.R.F.P.S.Glas. who died in 1899. Applicant left without means, and suffers from chronic rheumatism and sciatica. Manages to earn a little by letting rooms, but not sufficient to live on. Relieved three times, £36. Voted £12 in twelve instalments.

Daughter, aged 58, of L.S.A.Lond. Applicant has to look after invalid father, who is an annuitant of the Fund, and owing to the high price of food finds it difficult to manage. Relieved once, £10. Voted £10 in two instalments.

Daughter, aged 41, of L.S.A.Lond. who died in 1887. Applicant's mother, who has just died, had recently been helped by the Fund. The Guild proposes training applicant as a shorthand-typist, and placing her in a position to earn her own living. Voted £5.

Daughter, aged 51, of F.R.C.S.Eng. who died in 1890. Applicant is a chronic invalid, and unable to undertake any permanent work. Relieved eighteen times, £165. Voted £12 in twelve instalments.

Daughter, aged 51, of M.R.C.S.Eng. who died in 1885. Applicant suffers from neuritis and defective eyesight, and was only able to earn £2 last year. Only other income £20 from sister. Relieved nineteen times, £221. Voted £15 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

The Royal Medical Benevolent Fund Guild is now called upon, as a result of the war, to deal with many widows and children who, in happier times, would not have thought of asking for assistance. It is glad to receive secondhand clothing and household linen. The class of clothes most wanted is that suitable for boys and girls working in offices, for women, and for old men. The gifts should be sent to the secretary of the Guild, 43, Bolsover Street, W.

British Medical Journal.

SATURDAY, JUNE 9TH, 1917.

## OFFICERS OF THE TERRITORIAL FORCE À LA SUITE OF A TERRITORIAL GENERAL HOSPITAL.

THE position of the Territorial medical officer who is *à la suite* ("available on mobilization") of a Territorial general hospital, who has accepted the imperial obligation and is in receipt of full army pay, affords a suitable text for reiterating two lessons already drawn in these columns. One is the need for economy on the military as well as on the civil side, and the other for co-operation between the military authorities and representatives of the civil profession and community.

When Sir Alfred Keogh in 1907 organized the Territorial Hospital Medical Service it is quite clear that he contemplated *à la suite* officers having a two-fold function. They were intended to staff a military hospital, but they were to continue to serve the civilian hospital to which they were attached. Moreover, they were still to remain available for private practice. The language of the original memorandum, in which is set forth the position these officers would occupy in war, may not have been very precise; but the interpretation we have given to it correctly represents the belief of the officers concerned and, we make no doubt, the intention of the military authorities also.

At the beginning of the war the wisdom of the establishment of the Territorial Hospital Service was proved. It enabled military hospitals, staffed by competent physicians and surgeons, to be organized with great rapidity in all the chief centres, and so meet the strain of early casualties in the war. But as the magnitude of operations increased, and the need for as many whole-time medical officers for the army as possible became pressing, the question naturally arose whether all the officers *à la suite* of Territorial general hospitals were really essential to the combined military and civil work, or whether some could not be set free for whole-time commissions. When Territorial medical officers were asked to sign the imperial obligation, whereby they undertook to go anywhere and do anything, the *à la suite* officers were included. This was a new departure, for while the whole Territorial force is of course under the War Office, it was not intended that a Territorial officer *à la suite* of a Territorial general hospital should leave his own locality. By signing the imperial obligation an officer placed himself completely under the control of the War Office; thenceforward he could be ordered for foreign service at any time. Thus the War Office can call up any such Territorial *à la suite* officer whenever it thinks fit, without reference to the work he may be doing in his civil capacity, and without communication with those responsible for safeguarding the needs of the civil community.

The Central Medical War Committee had not long been in existence before a case arose in which the impossibility of the position which might thus be produced was demonstrated. In a certain city almost all the active practitioners were Territorial officers *à la suite*. The military authorities suddenly called upon one or two of these men to go elsewhere. The city was a large military centre, and the removal of these officers would have produced serious embarrassment on the military as well as on the civilian side. The Central Medical War Committee approached the Army Medical Department, and obtained a promise that, from this city at all events, no more officers would be removed without consultation with the Committee. The result of this incident, however, has not been sufficient to prevent similar occurrences elsewhere. Recently, as mentioned in a leading article on May 26th, a case occurred in which out of ten members of the staff of a general hospital eight were ordered suddenly to hold themselves in readiness for overseas service at forty-eight hours' notice. This calling up was subsequently cancelled, but the fact that such things can happen in the case of men some of whom, at all events, are indispensable to civilian needs, without previous consultation with any civilian body, at the direction of military authorities who profess that the civilian community is no concern of theirs, is a very serious matter.

We do not propose for a moment to dispute the right of the military authorities to deal with the officers under their command as they see fit, or as the necessities of the situation require. But we do assert that except for the power over them possessed by these authorities—and the fact that they are in khaki and receiving military pay—there is really no difference between the *à la suite* officers and the practitioners now being dealt with by the professional committees. In each instance there are some men who can, so far as the civil community is concerned, be spared, and others who are indispensable. Both classes are engaged in military as well as civil work. Both contain men who are essential to the civil community, which includes persons engaged in civilian industries so essential to the conduct of the war as munition work, engineering, shipbuilding, and coal-mining. In neither case have the military authorities in their possession means to enable them to estimate the civilian needs; but this information is in the possession of the civilian professional committees and can be made immediately available to the military authorities if they are willing to accept it. The only difference between the medical man in the two classes is that in the one case he is already in the army, in the other he is not. This is surely a case for consultation and co-operation between representatives of the two sides. Nor should it be left for a body such as the Central Medical War Committee to receive indirectly information of the calling up of *à la suite* officers in a particular town, and then to make representation about that town. A definite arrangement that no such calling up shall take place without consultation with the professional committee concerned will put the matter on a better footing, and in the meantime will pave the way to much better results for the army. For it would then be possible to ask the professional committees to go systematically through the staffs of hospitals, with a view to finding out how far the civil community can spare the services of some of the *à la suite* officers. Thereafter, co-operation between the military authorities and the civilian representatives would lead to decision as to the most economical procedure.

We said that the position of the *à la suite* officer showed the need for co-operation, and the need for economy. The latter point is one worthy of much thought. No man can do more than a certain amount of work in the day over a long period of time. The officers *à la suite* have, for the most part, their hands full, partly with work in the civilian hospitals, partly with private practice, partly with their work in the

Territorial general and other military hospitals. To make it economical to remove such a man from the work on which he is engaged it must be shown either that he will be able to do even more work in the army than he is now doing, or that there is an adequate supply of practitioners in the town with sufficient time and skill to carry on his work in his absence. Now in the recent case to which we have referred the removal of eight out of ten of the hospital staff would have left a large civilian community almost without specialist assistance. Moreover, the remaining practitioners, even if they possessed the special knowledge, had not the time to carry on the civilian work; there is no evidence to show that any of the eight were doing unnecessary work; and, finally, it seems clear that by no possibility could they do more work in the army than they are doing at present for the soldier and the civilian. There is no doubt that some whole-time medical officers would have had to be sent down to deal with the large military hospitals in the area. From all the evidence that has been brought before us we cannot help thinking that instead of eight men doing a full day's work, partly civil and partly military, there would have been sixteen men engaged to do whole-time work for the army, some in the town and the rest somewhere else, but in fact none of them doing a full day's work, while the remaining civil practitioners in the town would have struggled with the increased work thrown upon them by the withdrawal of the eight *à la suite* officers.

The fact is that economy in the use of medical manpower is an urgent matter which should be investigated by the military authorities and the civil representatives in close consultation. The use of civil medical practitioners for military work is on a footing very similar to that of the use of Territorial officers *à la suite*. The cases of two large towns have been brought to our notice where a number of medical men under 41 cannot be taken for the army owing to the existence of large military hospitals. The task of staffing these hospitals in addition to attending to the needs of part of the civil community gives each of these men a very full day's work. There are not enough men over 41 to do both the civil and the military work; and such as exist are already working to their full capacity. The War Office might say "Give us the men under 41, and we will make arrangements for the military hospital work." But once again it is almost certain that this would result in twice the number of men to do work in the army, with an increased burden on the men over military age who remain in civil practice. Moreover, the question is complicated by the fact that the withdrawal of all men under 41 will leave the area insufficiently staffed as regards men skilled in special directions.

With the fuller co-operation which we have urged so frequently, it would be possible to find some method of dealing with the urgent problems involved. The actual position is that, while in the majority of cases it is difficult for the army doctor to find a full day's work to do, it is becoming increasingly difficult for the civil doctor, however long his day, to do the work that falls on him. It is easy to say that every sacrifice should be made by the civilian, but the civilian community is already on very short commons. If it be true that the bulk of the R.A.M.C. are decidedly underworked, then, even if some modification of peace time establishment is needed, it is for the Army Medical Department to consider what modifications are possible. Such consideration cannot be thorough without representation of the civilian side, and so far there is no evidence that the Army Medical Department is in the habit of consulting any authoritative civilian body. Military economies are absolutely necessary, and all the evidence leads to the conclusion that it is in this country that they must first be practised. The staffing of hospitals is, perhaps, the most urgent question at the moment, and the position of the Territorial officer who is *à la suite* of a Territorial general hospital is a suitable subject for early consideration.

## MILITARY ORTHOPAEDICS AND THE AMERICAN UNIT.

COLONEL T. H. GOODWIN, A.M.S., the medical member of Mr. Balfour's mission, took over with him a request that the United States of America should lend us some orthopaedic surgeons to work in military orthopaedic hospitals in the United Kingdom. This request was very cordially received, and General Gorgas, Surgeon-General of the United States army, placed the work of organization in the hands of Dr. Joel E. Goldthwait of Boston, who at once went to Washington and associated with himself Dr. W. G. Erving of Washington. From this central situation these two surgeons set to work to communicate with other leading orthopaedic surgeons in the United States, and so cordial were the individual responses that within three weeks a unit, consisting of twenty surgeons, in addition to the director and assistant director, was fully organized and all but one member had sailed, the last man being detained for a few days by a pressing engagement at home. These surgeons (see p. 779), all of whom are commissioned in the United States Reserve—the Director, Dr. Goldthwait, and the Assistant Director, Dr. Erving, with the rank of major, thirteen other seniors with the rank of captain, and seven juniors with the rank of lieutenant—are paid by the United States War Office, which has placed their services fully and freely at the disposal of the British Director of Medical Orthopaedics, Sir Robert Jones.

The quickness of the response of the United States, the friendly spirit in which the whole scheme has been carried through, and the generous scale on which the arrangements have been made will profoundly touch the heart of this country. We are told that the medical units—the orthopaedic unit and six general hospitals—form the first contribution to the prosecution of this war of liberation which America found itself in a position to make, and so soon as the need was declared the help was given. The promise that if more help is needed in either direction it will be forthcoming will be fulfilled in the same spirit.

A distinguished surgeon some two years ago, when the need for the application of orthopaedic principles to the treatment of the men returning from the war zone first began to attract attention, said that it seemed that the military orthopaedists claimed half of military surgery for their department. If he had said that the claim was for half the military surgery at home he would probably not have been far wrong, and it is being recognized more and more that the application of these principles should begin at a very early stage. The word "orthopaedic" is an adaptation from the French *orthopédie*; the earliest authority Murray gives for this word is 1747, and for the English words "orthopaedy" (*ὀρθός*, straight; *παιδεία*, rearing of children) and orthopaedic, 1840. No doubt the primary meaning was the correction of deformities in children, but Murray notes that it has been extended to mean the correction of bodily deformities in general. That this took place at an early date is rather strikingly shown in Le Gros Clark's translation of Dupuytren's lectures on *Injuries and Diseases*

*of Bones*.[1] In speaking of what the surgeon should do when in consequence of fracture the ends of the bone assume an altered and defective relation to each other, he asks whether the surgeon should leave this evil tendency to work its own mischief, involving as it does a disagreeable deformity and curtailing the use of the limb, or whether he ought not to make some effort to remedy the defect by re-establishing the normal direction of the limb. And he answers that "there exists considerable analogy between the deformities resulting from fracture and those which are attributable to other causes. It is well known how much benefit is derived from orthopaedic means in this latter class of affections; and if vicious curvatures of many years' standing may be corrected without inconvenience, how much rather may we anticipate the same desirable results, by the employment of analogous means, where the deformity does not date longer than a few weeks back, and is only maintained by a newly formed structure, which does not attain to the same consistence with bone until after the lapse of a very long time." If we add to this the lesions of joints, which no doubt Dupuytren had in mind, although his subject did not lead him specifically to mention them, it is seen how large a field there is for the application of orthopaedic principles in military surgery.

We have asked Major Goldthwait—than whom there could be no better authority—what he understands by the term "orthopaedics," and his reply is: "Orthopaedics with us has to do with 'the diseases or lesions of the bones, joints, and muscles, and deformities.' At one time it was expected to devote itself to the deformities, but now it is recognized that the treatment of the disease or special lesion that is causing the deformity is the most essential feature. For that reason the treatment of a rheumatic or rheumatoid condition is as essential as the treatment of the joint manifestation. The same is true of the deformities due to nerve injuries. Military orthopaedics is not different from civil orthopaedics, except in the greater prevalence of trauma as the cause of the lesion." Those who turn back to the remarkable article on military orthopaedic hospitals contributed to this JOURNAL by Dr. Colin Mackenzie on May 26th last will see how nearly Major Goldthwait has packed Dr. Mackenzie's doctrine into a definition.

The treatment of men who have sustained compound fractures of the bones, with or without involvement of joints, raises many difficult problems, surgical and administrative. Among the most severe injuries a man can receive and survive is a gunshot wound fracturing the femur, especially anywhere in the upper third. He is at once rendered helpless, and for a week or ten days runs peril of his life from the many wound infections by which he may be assailed. If he escapes this he must undergo a long course of treatment—probably three months—before the bones have consolidated sufficiently to make it possible for him to do much for himself. In an article published at p. 777 of this issue some account is given of the attempts which German surgeons have made to deal with the transport of these cases at the earlier and later stages. These notes will not teach British surgeons anything, for the methods used in the British armies, founded upon Thomas's principles, are superior to any described in the German publications available; but the article may help to give an idea of the difficulties encountered in dealing with the problem of fractures in this situation. The administrative problems have to do not only with the transport of the wounded man from the front to the base, but also with the selection of the proper place in which to treat him until the fracture is united. There must be continuity of highly skilled treatment if the best results are to be obtained. That the best results should be obtained is of the highest importance not only to the wounded man himself, but to the country. The number of these severe cases of fracture of the thigh is very considerable, and a man with a malunited fracture of the femur will probably always remain unable to engage in any active pursuit. Somewhat similar considerations apply to fractures of the humerus high up, although the difficulties are diminished by the fact that the man can move about. In both cases continuity of treatment is of the first importance.

[1] London: Sydenham Society, 1847.

## BIRTHDAY HONOURS.

THE Birthday Honours list is a very long one, and contains a large number of distinctions conferred upon medical officers, regular or temporary, for services rendered in the field or in connexion with the war. An exception—if it is to be reckoned an exception, for he has been an active member of the Central Medical War Committee and the Committee of Reference—is the baronetcy conferred upon Dr. Frederick Taylor, President of the Royal College of Physicians, which will give great satisfaction to his colleagues, pupils, and friends. The knighthood conferred upon Colonel Robert Jones, who received the C.B. at the new year, is not an exception, for it is a further recognition of the fine work he has done, as Director of Military Orthopaedics, in the organization of this great new service, appreciation of the immense importance of which has steadily grown during the past year. He has also been at the same moment the recipient of a very high compliment from America, since the rapidity and cordiality shown in organizing the American orthopaedic unit of twenty-one surgeons to serve under his instructions is a compliment not only to his eminence as a surgeon but to his qualities as a man. Surgeon-General Eugène Fiset, on whom the honour of knighthood is conferred, was long an officer on the permanent staff of the Canadian Army Medical Corps. He went with the first Canadian contingent to South Africa, serving throughout the war and being taken prisoner. For his services at Paardeberg he received the D.S.O. In 1905 he became Director-General of Medical Services, Canada, but in 1907 he took over the work of the deputy Minister of Militia during the illness of the incumbent of that office; after that minister's death he succeeded to the post, Sir Eugène Fiset's place as Director-General being taken by Surgeon-General Carleton Jones. Sir Eugène Fiset was largely responsible for the organization of the Canadian contingent sent to take part in the present war. The honour of knighthood is also conferred upon Sir Thomas Kennedy Dalziel, who is lecturer on Clinical Surgery in the University of Glasgow, and surgeon to the Western Infirmary; on Sir E. C. Stirling, C.M.G., professor of physiology in Adelaide University, at one time lecturer on the subject at St. George's Hospital and a well known authority on the anthropology of Central Australia; and on Sir Herbert Waterhouse, surgeon to Charing Cross Hospital and Dean of the school, who has recently returned after serving for nearly a year with the Anglo-Russian hospitals in Russia. Of the military honours the first to catch the eye is the promotion of Sir Arthur Sloggett, K.C.B., Director-General with the British armies in France, already C.M.G., to be K.C.M.G. The same honour is conferred upon Surgeon-General Tom Percy Woodhouse, C.B., who was the D.M.S. of the original expeditionary force, and now holds the onerous and exacting office of D.M.S. of the lines of communication, and upon Surgeon-General Francis Treherne, C.M.G., who was D.M.S. in Mesopotamia during the

reorganization of the medical arrangements of the expeditionary force there. The other recipient of this honour is Colonel Robert Neil Campbell, C.B., I.M.S., who was in command of the Pavilion Military Hospital for Limbless Soldiers, Brighton. Lieutenant-Colonel P. J. Freyer, who is made K.C.B., retired from the Indian Medical Service some years ago, but has long been consulting surgeon to Queen Alexandra's Military Hospital, Millbank. Soon after the war began he became consulting surgeon to the Indian Hospitals at Brighton, and afterwards consulting surgeon to the Eastern Command, with charge of the county of Sussex. The same honour has been conferred on Colonel James Magill, A.M.S., who served with the Guards Camel Regiment during the Nile campaign of 1885, and was severely wounded at Abu Klea. He also served during the South African war. A full list of all the other distinctions conferred will be found at pages 770 and 780.

## THE FRENCH ARMY MEDICAL SERVICE.

MENTION was made in these columns on May 19th (p. 657) of an official decree (May 11th) defining the relation of the French Service de Santé (Army Medical Service) to other branches of the Army. Regulations under this decree, made by the Under Secretary of State in consultation with the Commander-in-Chief, have now been issued. In each Army a medical officer, with the title Chef Supérieur du Service de Santé, is now a member of the head quarters staff to act as technical adviser in direct collaboration with the general commanding. He will elaborate with the general officer all measures concerning the army medical administration, and, in particular, the use and allocation of all medical units, and the arrangements for evacuation. All the reserves of medical personnel and sanitary material are at his disposition and he has permanent authority to issue orders in the name of the general commanding. A similar organization has been established for each Army Corps, for each Division, and for the lines of communication; further, a médecin major de 1re classe is attached to each railway transport officer at all the main stations and junctions to exercise medical control over all ambulance trains, and to keep in touch with the medical officers of the advanced formations. We learn from an article published by Dr. L. Mourier, deputy, and member of the Army Commission, in *Le Journal*, that serious defects in the handling of wounded men were disclosed during the French offensive last April, and that notice of various interpellations in both Chambers were given. The matter was fully considered by the Army Commissions of the two Chambers, which, after hearing the Minister and the Under Secretary of State for sanitary affairs in the War Ministry, recorded its regret that the military authorities had not in the thirty-third month of the war taken steps to ensure that the wounded French soldiers received the care and early surgical treatment they had earned. The failures which then occurred are attributed to a defective system. In addition to the steps already mentioned, it is intended that in the office of the Under Secretary for sanitary affairs in the War Office there shall be a chief of the medical staff, who will act as a connecting link between the generalissimo in the field and the minister. The chief of medical personnel at general head quarters in the field is to have authority also over all military medical buildings and over the means of evacuation. The general object of the reforms is to give the Army Medical Service the same position in the army and the same control of its own personnel and material as the artillery or the engineers. It is urged that the Army Medical Service should have its own engineer service for the making of dug-outs, or erecting protection for advanced medical posts, and for preparing sites for hospitals and building the huts. Further, the whole service of motor ambulances should be directly under the control of the divisional medical officers, and, where necessary, special light railways should be laid down solely for the use of the medical service, the transport of its material, and the evacuation of wounded. It appears that serious delays occurred recently in evacuating wounded from the Soissons and Rheims areas, the ambulance trains being held up for as long as thirty-six hours owing to the single line railway being encumbered by supplies for other branches. We do not gather that all these reforms have yet been accomplished, but it appears that there is a strong public feeling in France in favour of their application.

## GERMAN IDEAS OF HUMANITY.

AN example of the flapdoodle on which German editors, and through them the German public, are fed is afforded by a paragraph which appeared in our sedate contemporary, the *Deutsche medizinische Wochenschrift*, a short time ago. The editor seems to have been supplied with a version of a speech delivered by Lord Newton in the House of Lords on February 22nd, which led him to suppose that Lord Newton had said that the British civilians interned at Ruhleben were being well treated. What Lord Newton really said was that they were not being so badly treated as before and that they were no worse treated than the military prisoners. The improvement, he added, was not due to any action on the part of the German Government, but rather to its inaction and to the British prisoners being allowed to organize the camp on their own lines and so to make their existence more tolerable. The hardships the British prisoners suffered in Germany were, he said, enormous. Lord Newton also said that a certain number of British interned prisoners over 45—110 out of 650 at Ruhleben—did not desire to leave Germany. The editor of the *Deutsche medizinische Wochenschrift* thinks that after Lord Newton's speech we ought to stop criticism of the German ways of treating prisoners. This we should be very glad to do, but if we are to stop criticism it can only be when the Germans learn to treat their prisoners decently. Of this we have as yet little or no evidence, but, unfortunately, a good deal of evidence the other way. There is, for instance, the statement corroborated by the American Ambassador in Berlin, referring to November, 1915, showing that the German guards kept ferocious dogs in certain internment camps (in Wittenberg for one), and that these animals were allowed and encouraged to attack the prisoners, many of whom were badly bitten. Official protests have been made, but to them German authorities turn a deaf ear, and so recently as last December stated that the use of dogs had been shown to be a military necessity, and that they considered it was "impossible to regard this measure as a breach of the principles of humane and reasonable treatment of prisoners." Then, again, there is the more recent evidence taken from Australians captured on April 11th, a few of whom have escaped back into the British lines. They were first of all robbed by Uhlans; they were given one loaf between four or five men a day, and the French sympathizers who tried to get bread to them were brutally handled. Finally, for five days and six nights, 110 men lived in a room 50 ft. by 20 ft., with a tiled floor, and without any sanitary conveniences except a barrel, and fed upon one slice of bread, some fermented mangolds, and two cups of coffee a day; 240 others who were sent to work at a dump were given a daily ration of a third of a loaf, and a stew of horseflesh, with a little barley. Not only is forced labour on insufficient diet the lot of military prisoners, but they are deprived of their overcoats during the Russian winter, and sent to work within the zone covered by our own or the Russian artillery. This last iniquity the Germans have at length consented to stop. But the Kaiser himself is reported to have said, in a speech made during his recent visit to the Arras front, that British prisoners were to be treated with the utmost severity. Then there is the treatment of the deported Belgians and the forced labour imposed upon the inhabitants of

occupied territory in France. All the world has now seen the facsimile of the notice of July 20th, 1915, signed by Gross, Colonel and Commandant, posted in Holnon, a place about four miles north-west of St. Quentin, and in twenty-five surrounding villages. It is stamped with the Kaiser's arms and the legend, "Etappen-Kommandantur." It directs that all workmen, women, and children aged 15 shall work in the fields every day, Sundays included, from 4 a.m. to 8 p.m. The punishment for laziness was to be internment in barracks during the harvest and afterwards six months' imprisonment, every third day on bread and water. Lazy children and also lazy men were to be beaten with sticks. But we have not thought it necessary to record all the evidence of German misconduct towards prisoners and others in their power. We have been interested chiefly to publish enough evidence to let the indifferent understand that the conduct by which German doctors in official positions have disgraced medicine is execrated by the medical profession of this and all other civilized countries.

## PRACTICES IN WAR TIME.

WE wish to direct the attention of readers to two articles in this week's SUPPLEMENT, which describe the manner in which local medical effort has attempted to deal with professional problems arising out of the war. The first is a description of the central medical office and consulting rooms set up in Dundee in order to assist a diminishing staff of practitioners to carry on practice. Dr. R. C. Buist explains the working of the scheme, and indicates the success which has been achieved. The other is an account of a scheme devised by the North Staffordshire Division of the British Medical Association for the insurance of practices of medical men during war time and throughout the period of upheaval which is sure to be associated with demobilization. This scheme is to some extent tentative, and discussion of it is invited by its originators.

## THE TREATMENT OF WAR NEUROSES.

IN a recent lecture Professor L. Mann[1] gave a survey of the progress made during the war in the treatment of war neuroses. He and the majority of his colleagues had begun on conservative lines—that is, they had prescribed rest in bed, a full diet, gentle hydrotherapy and electrotherapy, and sedatives. The results had not been encouraging. The purely neurasthenic manifestations had, indeed, often reacted so satisfactorily that after weeks or months in hospital the patients had been able to return to garrison duty or even active service. But well defined psychogenic or hysterical phenomena, manifested in paralysis, contracture, cramp, astasia, tremor, and so on, were scarcely benefited by these conservative measures. The narcotics hyoscine, morphine, opium, chloral and bromides, were practically useless. Wilmanns found that, under such conservative treatment, only 5 per cent. again became fit for active service, whereas 64 per cent. had to be discharged from the army. Subsequent investigations had shown that of these discharged patients 75 per cent. were either just as ill or worse than before. Mann and others had been equally unsuccessful. Turning to the treatment by hypnosis, he quoted the startling results claimed by Nonne of Hamburg, who alleged that 65.4 per cent. of patients suffering from "gross hysteria" were cured or relieved of their symptoms, and that of these 29.5 per cent. had been cured in one sitting. Nonne's claims had subsequently been reduced to cures in 50 per cent., but even this was a brilliant result. Nonne was convinced also that his results could be permanent, for some of his patients had endured the fighting about Verdun and the Somme for months without a relapse. Yet Mann found this treatment applicable only in a few cases. Its effectiveness depended largely on the personality of the physician, and few patients and still fewer physicians were qualified to undergo or practise it. Mann then discussed at length Kaufmann's method[2] of combined suggestion and severe electrical shocks. He endorsed it heartily with a few reservations. He referred to the cruelty of the torture inflicted, and admitted that there had already been two deaths under this treatment. In both cases an enlarged thymus had been found at the necropsy. He thought, however, that deaths could be avoided by better technique, notably by the use of the faradic current only.

[1] *Berl. klin. Woch.*, December 11th, 1916.

## MILITARY HOSPITALS IN THE FUTURE.

WE are informed that the War Office has decided to make an immediate but strictly limited trial of the scheme for organizing hospital units contained in the pamphlet by Lieut.-Colonel Sir James Kingston Fowler, K.C.V.O., on the *Medical and Nursing Services of the Imperial Army*,[3] to which reference was made in these columns on May 26th (p. 692). Circumstances having necessitated an increase in the hospital accommodation for the armies in the various theatres of war, it has been determined that one of the additional units required may be raised from amongst the medical men educated at a single hospital in London who have not yet been able to serve abroad for various reasons, or, having already done so, desire to renew their engagements for a further period. The Middlesex Hospital has been selected for the trial, and Sir James Fowler has undertaken to form a "mobilization centre" as described in his pamphlet, in connexion with it. This is not to be regarded as in any sense affording a test of the value of the scheme as a whole, which is one obviously intended to come into operation at the outbreak of a war. More than 400 Middlesex men are known to be now, or to have been some time during the war, serving as officers R.A.M.C., and other hospitals have an equally good record. The officers of this new unit will all be Middlesex men, the matron, sisters, and nurses will have been trained at that hospital, and the V.A.D.'s will be selected from families connected with the hospital, but the orderlies will be men now serving with the R.A.M.C. The unit will be known as The Middlesex No. — General Hospital. No undertaking will be given that the personnel of this unit will not be detached to other units, as the exigencies of the service may render such a proceeding necessary. The unit will be raised for general service, and will be sent to any of the various theatres of war at which it may be required. It follows that the officers, nurses, and others must all be fit for general service, and engagements will be for the duration of the war. No applications from Middlesex men now serving abroad for transfer to this unit will be considered except under special circumstances. We are asked to add that communications connected with this unit should in the first instance be addressed to Lieut.-Colonel Sir James K. Fowler at the Middlesex Hospital, or, in the case of nurses and V.A.D.'s, to the Matron of the Middlesex Hospital, Mortimer Street, London, W.

## SOME AMERICAN OYSTER-BEDS.

THERE is a widespread opinion that even during the oyster season the oyster is a rather dangerous article of food, prone to give rise to enteric fever, and therefore better avoided unless well cooked. This view is, we hope, wrong and calumnious, thanks to the care now constantly exercised by those responsible for the purity of the beds from which oysters are supplied in this country. But it has not always been so; nor is it always so in other

[2] BRITISH MEDICAL JOURNAL, December 23rd, 1916.
[3] Macmillan and Co., London. 3d.

countries, as is shown in a recent *Public Health Bulletin*[1] issued by the Treasury Department of the United States of America. Here are recorded the investigations of the pollution of tidal waters about Maryland and Virginia, with special reference to areas bearing oysters and clams. The researches were carried out in a service steamer fitted as a floating bacteriological laboratory and oyster dredger combined. The area investigated included half a million acres of oyster-producing bottoms. Nearly twelve hundred samples of oysters were collected from various suspected and representative parts of this area, together with samples of the water from just over the oyster beds visited. The bacteriological examination consisted in estimations of the numbers of *B. coli* per c.c. of this water and of the liquor taken from inside the shells of five or more oysters. The *B. coli* determinations were made by the use of lactose peptone broth, confirmed on Endo's medium, instead of lactose bile. The lactose broth tubes were kept at 37° C. for forty-eight hours; smears from all tubes showing gas and from the next highest dilution were made upon Endo's plates. Other details of the laboratory routine are enumerated, and are described by the medical officer in charge as, in spite of their limitations, the most trustworthy yet suggested. The general conclusion reached is that the oysters of Chesapeake Bay and its tributaries are a safe food as a whole. About half of 1 per cent. of the oyster bed area investigated showed serious pollution with *B. coli*, but it is added that a large part of the polluted area had been voluntarily abandoned by the lessees, or had been closed by the authorities, and was not being worked. Only thirty-four of the samples of oysters collected contained sufficient *B. coli* to give "a score" of fifty or more, fifty being at present generally considered the limit of safety from the bacteriological standpoint; exactly how the score is calculated is not apparently stated. The author of the *Bulletin* expresses the hope that this report will have two good effects. In the first place, it should reassure the American public as to the general safety of eating the oysters it is offered in the market. In the second place, it will facilitate the work of the local, State, and United States authorities in identifying the polluted oyster beds, and in remedying the pollution and condemning the areas so long as they remain a source of danger. Instances are quoted in which the investigations have already led to joint and effective action in this direction by the Federal and State Governments concerned. The *Bulletin* contains a great deal of information of both local and general interest, and is well illustrated with maps of the areas investigated.

## THE AMERICAN PHILOSOPHICAL SOCIETY.

MR. ARTHUR BALFOUR has been unanimously elected a member of the American Philosophical Society. The society has no honorary members, and Mr. Balfour's election took place under a rule of the society which has very seldom been put into force. It provides that a foreign member may be specially honoured in this way on the unanimous recommendation of the officers and council, ratified at the next subsequent meeting of the society by a unanimous vote. The society originated in Benjamin Franklin's "Junto," which he established in 1727, when he was only 21. It was organized formally under its present name in 1743. The rules were modelled by Franklin, its first president, on the traditions of the Royal Society, and it has always recognized the humanities broadly interpreted to include philology, archaecology, statecraft, and law. The society has had a remarkable series of European members elected under the ordinary rules, including from Great Britain Sir Joseph Banks, Dr. Fothergill, Edward Jenner, John Hunter, Dugald Stewart, Sir Charles Lyell, Mr. Gladstone, the four Darwins, Sir William Ramsay, and Lord Bryce. At the meeting at which Mr. Balfour was elected, when the president, Dr. W. W. Keen of Philadelphia, who is now in the tenth year of his occupancy of that office, was in the chair, a memoir of Sir William Ramsay was read by the secretary.

[1] *Investigation of the Pollution of Tidal Waters of Maryland and Virginia, with Special Reference to Shellfish-bearing Areas.* By H. S. Cumming, Treasury Department, United States Public Health Service. Public Health Bulletin No. 74, March, 1916. Washington: Government Printing Office. 1916. (Med. 8vo, pp. 199; illustrated.)

## "GHOSTS."

IT is a sign of the times that there are now running in London two plays which deal with the subject of venereal disease. Even four years ago such a thing would have seemed impossible, and thirty-six years ago, when *Ghosts* was received with a storm of violent abuse, few could have foreseen how public opinion would change towards it. The reason is mainly to be found in the propaganda work which led to the appointment of the Royal Commission on Venereal Diseases. Of *Ghosts*, which is now running at the Kingsway Theatre, it is well to remember, in the words of Edmund Gosse, that "the author does not pose as a moral teacher, but as an imaginative investigator. He often, and with much heat, insisted that he was not called upon as a poet to suggest a remedy for the diseases of society, but to diagnose them." The unrelieved gloom of the final situation leaves the spectators with the feeling that Ibsen only intended to put the problem before them in its most dramatic form, leaving its solution to them if they were equal to it. The acting is good, notably in the parts of Mrs. Alving and Pastor Manders. It is a pity, however, that *Ghosts* is advertised as "the great forbidden play," though there was nothing in the manner of the audience to suggest that they came in any prurient spirit.

AT a meeting of the Section of Medicine of the Royal Society of Medicine, at 1, Wimpole Street, on Tuesday next, at 5.30 p.m., Major Aldo Castellani will give a lecture and lantern demonstration on tropical diseases to which the allied troops are exposed in the Balkanic zone. Since the operations in Macedonia commenced Major Castellani has spent a good deal of time in the Balkans, going as far forward as Monastir. But his main work was concerned with the investigation of malaria in the Struma Valley and the institution of prophylactic measures, a task for which his long experience and brilliant original researches in tropical diseases so specially fitted him. He is now in this country in connexion with the work of the interallied sanitary conference, of which he is a member.

WE announced a fortnight ago that American medical men on war duty in this country were invited to make use of the library of the British Medical Association, 429, Strand, London, W.C., which is open from 10 a.m. to 5 p.m., and on Saturdays to 2 p.m. We are asked to state that the Royal Society of Medicine offers similar facilities at its house (1, Wimpole Street, London, W.), and invites these officers to attend the meetings and demonstrations held by the various sections of the Society at the times announced in the weekly medical journals. This is an extension of the invitation already given to medical members of the British Overseas Contingents. The Society's house, which provides writing, conference, smoking, tea, and dressing rooms, as well as a library for reading and reference, is open every day, except Sunday, from 11 a.m. to 6.30 p.m. The Secretary of the Society, Mr. J. Y. W. MacAlister, also offers to help officers of the British Overseas and American Contingents who may be abroad in any practicable way possible—as, for instance, by sending information on any subject in which they are interested. Cards for suspension, displaying the nature of the facilities offered, can be obtained on application to Mr. MacAlister.

# THE WAR.

## TRANSPORT OF GUNSHOT FRACTURES OF THE THIGH:

### GERMAN SPLINTS AND METHODS.

THE question of the transport of cases of fracture of the thigh has been dealt with by Perthes, Colmers, Rogge, Thöle, Vulpius, and others. Perthes discussed three sets of conditions: (1) Those in the West, where the relatively stationary Feldlazarett was only a few miles behind the trenches; (2) where there was lack of plaster, or lack of time at the Feldlazarett; and (3) the Eastern front, where a transport of many miles was necessary before a stationary hospital could be reached. (1) In the condition first named a provisional splint was applied at the dressing station, the extension splints of v. Hacker, the Lange splint and straw splints were preferred. Peiser's and Rummel's splints were also recommended.

Hacker's splint[1] was an external wooden splint, reaching from the waist to about six inches below the foot. A strong nail was driven into each end, and well padded bandages or strips of clothing passing round the perineum and ankle were tied over these after the limb had been forcibly extended. The knee was fixed by bandages above and below. This splint was stated to immobilize well and to exercise some extension; the latter, however, rapidly diminished, owing to the limited elasticity of the bandage. Anschütz modified this splint, using a piece of wood 130 cm. long, 10 cm. wide, and ¾ cm. thick, with notches at the extremities, over which the bandages were tied. Under vigorous extension the splint bent slightly, and thus became elastic, and exercised a continuous extending force, which could be further increased by tying bandages to the ends of the splint and knotting them tightly on its outer side. The splint could also be improved by inserting a spiral spring between the foot and its lower end.

Peiser's splint[2] was made of Cramer's splint material (parallel iron wires with cross-wires), and consisted of a pelvic ring, to which was attached anteriorly a splint 8 cm. wide, passing down the front of the limb as far as the middle of the leg, with a slight forward convexity at the patella. A second splint, attached to the ring posteriorly and 10 cm. in width, passed down the back of the

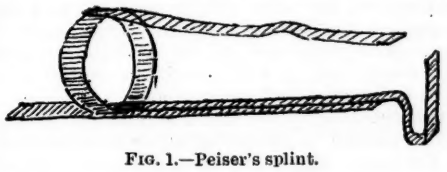


FIG. 1.—Peiser's splint.

limb as far as the heel, where it made a sharp bend backwards and then forwards beneath the sole. This part of the splint was doubled from the heel to the pelvis in order to give additional strength. The several parts were tied together with string at the points where they overlapped, to prevent shifting. The limb was first padded, the splint placed in position, and a bandage applied starting from the foot. Windows were provided by cutting away the transverse wires.

Rummel's splint[3] consisted of three pieces of Cramer's wire splinting. Two of these, which overlapped at the knee, formed a long posterior splint extending from the angles of the scapula to the sole; the lower of the two extended to the middle of the thigh, was bent at an angle of 150 degrees at the knee, and had a backward curve at the heel; the upper of the two reached below to the middle of the calf, was bent at an angle of 150 degrees at the knee, and superiorly was modelled to fit the thigh and back. The two were fixed together by string at their overlapping part, and together formed a double inclined plane with an angle of 150 degrees. The third piece of splinting was bent so as to form a support to the double plane, to which it was fastened by string. The measurements required—namely, from the sole to the bend of the knee, and from the latter to the tuber ischii—were taken on the sound limb, flexed almost to a right angle at knee and hip. In order that good extension should be provided,

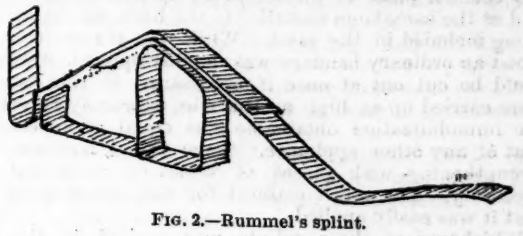


FIG. 2.—Rummel's splint.

the thigh plane was made about 5 cm. longer than the leg plane. The back and gluteal regions needed to be well padded. An anterior plaster splint could be readily added, including the leg and thigh, and gave great firmness for long transport.

Lange's splint in its original form was intended for use in civil practice.[4] It consisted of a piece of band iron 36 mm. wide and 2 mm. thick, to act as a posterior splint reaching from thorax to foot, and furnished with a foot-plate. To give the iron the necessary rigidity it was hammered so that it was arched, instead of linear, in transverse section. From three to six narrower transverse pieces of soft iron were fixed to this, and could be modelled with the hand to the varying circumference of the limb.

FIG. 3.—Lange's splint, original form.

Further, instead of ordinary padding, a layer of felt was fixed to the iron framework, that lining the transverse pieces extending somewhat beyond the metal, and being furnished with buckles. The splint was applied over the patient's clothes.

In the modified form, for military purposes, Lange replaced the felt by cardboard. Felt was not always obtainable, and the cardboard, if cut into large pieces and sewn to the iron splint, exercised a more diffused pressure, and was moreover readily replaced if it became soiled. Short straps with buckles were attached to the extremities of the transverse bars, or, if these were not obtainable, string served the purpose. The original straight form was further modified by an angular bend of 150 degrees at the knee and hip, thus producing a double inclined plane, and additional transverse bars were added.

In its final form, therefore, the splint consisted of a long posterior iron splint reaching from thorax to foot, provided with a foot-plate, and bent at an angle of 150 degrees at knee and hip. To this were attached seven transverse bands of soft iron (one for thorax, one for pelvis, three for thigh, and two for leg), and beneath these were placed three broad pieces of cardboard—one for the hinder and lateral aspects of the leg, one enveloping the thigh, and one

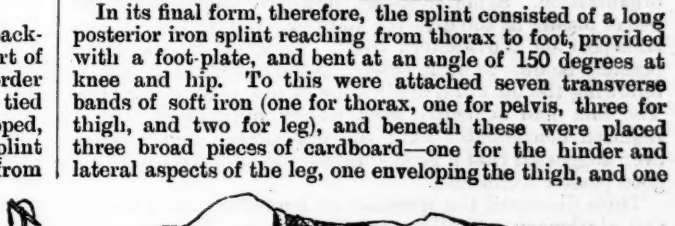


FIG. 4.—Lange's splint, modified for military purposes.

for the loins and lower parts of the thorax. To support the inclined plane at the knee a piece of band iron bent into the form of an inverted V was used. Patients were apt to complain of discomfort from the extending force at first. If this continued, the force could be reduced by inserting a thick pad between the hinder surface of the pelvis and the splint. If the extending force were insufficient it could be increased by placing a pad between the splint and the calf.

[1] *Muench. med. Woch.*, 1914, Feld Beil., No. 51; and Bruns's *Kriegschir.*, Heft 4, p. 551.
[2] *Muench. med. Woch.*, 1915, No. 23, p. 794.
[3] *Muench. med. Woch.*, 1915, No. 48, p. 1658.
[4] *Muench. med. Woch.*, 1914, No. 33, p. 1826; and Ibid., 1915, No. 5, p. 164.

The straw-plaster bandage [5] was thus applied. Padding having been applied and held in place with an ordinary bandage, straw was laid lengthwise on all sides of the limb. Into this layer of straw, which should not be too thick, a paste of plaster of Paris was thickly spread and at the same time modelled to the limb, the foot always being included in the mass. While the plaster was still moist an ordinary bandage was roughly applied. A window could be cut out at once if necessary. If this bandage were carried up as high as the ribs, especially anteriorly, the immobilization obtainable was equal or superior to that of any other appliance. Some stated, however, that strengthening with pieces of wood or cardboard was necessary. The merit claimed for this straw splint was that it was easily applied.

Whichever of these splints was applied in the first instance it was replaced at the Feldlazarett by the plaster bandage. Since abscesses were liable to form beneath the plaster around the wound, and were not always indicated by a rise of temperature, it was necessary to make the window large, and it was best not to cut it out, but to exclude the space by means of a ring of cardboard, or the like, while applying the bandage. The window was planned with a view to assisting the surgeon into whose hands the case would subsequently pass; otherwise large accumulations of fetid pus might be found when the bandage was removed. For large, and especially for infected, wounds the *Bügelgipsverband* (hoop bandage) was considered much superior to the ordinary circular plaster bandage. In describing this bandage, Colmers stated "that it must from the outset be so planned that not only are the wounds uncovered, but that a sufficiently large area of the wounded limb is left exposed to enable operative measures to be carried out. The bandage can be used even at the dressing stations. Hoop iron can be found at every village blacksmith's, and the farrier of the division can rapidly give it the recognized form and fix transverse bars. It is possible with this hoop in the bandage to leave the entire thigh uncovered. The plaster bandages must be prepared shortly before use, and plenty of alum must be used, so that the large circular window may be cut out without delay and the case immediately transported.

"2. When there was lack of plaster at the Feldlazarett or insufficient time to apply the plaster bandage, the provisional splints mentioned above were made use of for the longer transport.

"3. When the initial transport was one of many miles, as on the Eastern front, it was most desirable that the plaster bandage should be applied at the dressing stations. It had been objected that this was not possible, that the surgeons at those stations had neither the time nor the material. This, however, was contradicted by the experiences in certain sections and was merely a matter of organization. Some surgeons, however, objected to the use of plaster at the dressing stations, even for the lengthy transport on the Eastern front. These objections might possibly be due, to some extent, to the unfortunate results following the unskilful application of the plaster bandage. The fact had evidently been widely overlooked that it required considerable skill and experience; and Vulpius even suggested that a good surgeon was not necessarily a good plaster technician."

Thöle discussed the question of transport under mobile and stationary conditions separately; in the latter the Feldlazarett had the character of a stationary hospital, and the problems of lengthy transport did not arise. For the initial transport he made use of a modification of Weissgerber's extension splint.

This consisted of a wooden splint 140 cm. long with a small board attached at right angles to its lower end. The splint, which was applied to the outer side of the limb, was perforated in four places for straps to pass round the leg, thigh, and pelvis. Extension was provided by means of a spiral spring 5 cm. long, fixed at one end to the board and at the other end to a piece of string tied to a figure-of-eight bandage round the ankle and foot. The other end of the string was twisted round two nails driven into the splint, so that the tension could be graduated. A perineal band passing to the upper end of the splint acted in counter extension. In applying the splint the perineal band was first arranged; the string passing through the upper ring of the spiral spring was then drawn upon until the required extension was obtained, and the end twisted

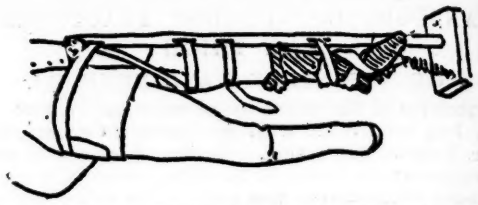


Fig. 5.—Thöle's modification of Weissgerber's extension splint.

round the nails and tied. Thöle claimed that this splint was easy of application, gave good fixation, and exerted a continuous extension which prevented longitudinal displacement. In discussing some of the provisional splints before mentioned he said that he had not found Lange's splint satisfactory, and expressed the opinion that the straw splints gave hardly sufficient fixation. He regarded Bruns's modification of Thomas's splint as good, but its cost was greater and it was more cumbersome than the Weissgerber splint.

If no splints were obtainable at the dressing station an improvised inclined plane was used, or the stretcher itself was employed as a splint. In the latter case the strap of a knapsack was passed round the foot, through the lowest ring of the stretcher pole and then across to the opposite pole, where it was fixed. A second strap passing to the head end of the pole acted as a perineal band, while a third fixed the limb at the knee by a figure of eight turn round knee and pole.

The Weissgerber splint was applied at the front dressing station. In stationary trench warfare when the Feldlazarett was practically a stationary hospital, no lengthy transport was to be anticipated. It was therefore unnecessary to change the splint at the main dressing station. In mobile warfare, on the other hand, when immediate transport from the Feldlazarett was to be expected, it was necessary that it should be changed either at the Feldhospital or the main dressing station, since the perineal band could not be tolerated beyond two days. It was, if possible, replaced by the plaster bandage, and it was very desirable that this should be applied at the main dressing station; otherwise, in the congested condition of the Feldlazarett, the case might have to be transported in disregard of the twelve to twenty-four hours' observation required to make sure of the satisfactory application of the bandage and of the possibility of the occurrence of spreading infection or haemorrhage.

For the transport from the Feldlazarett to the home hospital a plaster bandage including the pelvis was employed, the limb being fixed in a position of semiflexion. How far reposition of the fragments should be attempted was a matter of dispute; some deprecated any vigorous measures to effect this, others considered that exact reposition should be aimed at, others that it was sufficient if the broken ends were brought into a position in which they would cause no further damage to the soft parts. A short period of observation was desirable, as before mentioned, after the application of the bandage, but some surgeons made a rule of deferring the application of the bandage for two to three days in order to make sure of the absence of spreading infection.

If sufficient time were lacking at the Feldlazarett to apply the bandage, or if multiple large wounds rendered its application impossible, the case was transported in the Weissgerber's splint, provided the transport was of no more than two days' duration. For longer transport or where the duration of transport was uncertain, a modification (Fig. 7) of Rummel's extension splint was made use of. This was constructed out of the so-called Cramer's splint—stout wires connected by cross wires (Fig. 6).

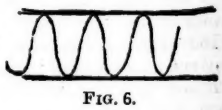


Fig. 6.

"A splint of this material, 1 metre long, modelled to the sole and hinder surface of the leg, but with a considerable backward curve carrying it away from the heel, is bent at an angle of 150 degrees at the knee, and reaches up to the middle of the back of the thigh. This is pro-

[5] *Muench. med. Woch.*, 1915, No. 13. Bruns's *Kreigschir.*, Heft 4, 1915, p. 548 and 553.

longed to the angles of the scapulae by a second splint reaching from the middle of the calf and modelled to the parts. Support is provided for the double inclined plane thus formed by a piece of splint bent into suitable shape. The sound limb is made use of for modelling the several parts of the splint. To obtain good extension the length of the thigh plane must be 5 cm. more than that of the leg plane. The trunk acts as the extending force. A circular band, made of connected pieces of wire splint, is fixed round the pelvis, and a plaster splint is modelled to the

FIG. 7.—Thöle's modified Rummel splint, with anterior straw-plaster splint for leg and thigh.

front of the limb from the dorsum of the foot to the pelvis, or, instead of this, two lateral splints are employed. To dress the wound it is only necessary to remove the latter, the limb remaining fixed on the inclined plane. If a wound is present on the hinder surface of the thigh, it is necessary merely to cut away some of the transverse wires of the splint to form a window. A chaff cushion is placed beneath the dorsal part of the splint." Thöle considered this superior to Peiser's splint, which he also commends.

The spiral plaster bandage is not mentioned by these authors. Rogge, describing this bandage, stated that it was necessary in the first place to plan out the exact course that the spiral was to take on the limb. The wounds were to be avoided and if possible the seat of fracture should be left accessible to palpation. In order that extension might

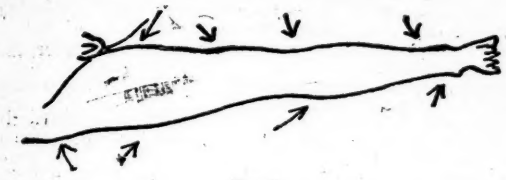


FIG. 8.

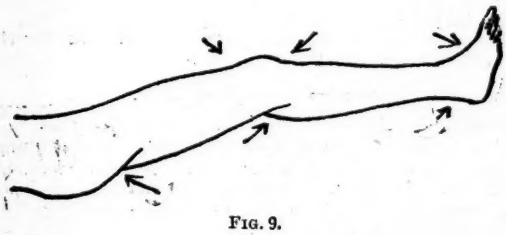


FIG. 9.

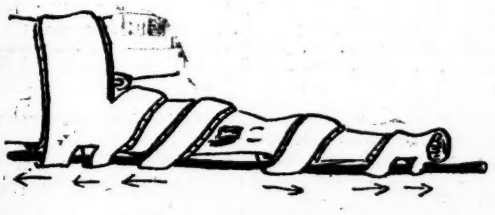


FIG. 10.—Spiral plaster bandage.

be secured it was necessary to arrange the spirals so that they bore on the prominences of the limb (Figs. 8 and 9). The points for downward pressure were above the heel, above the malleoli, the calf, above the inner condyle of the femur, and above the patella; for upward pressure, more especially the inner side of the thigh and the tuber ischii.

A pad somewhat broader than the plaster bandage was first laid on the limb, and over this the plaster bandage itself, working from the foot upwards. When a sufficient thickness had been applied a wooden splint, 6 to 15 cm. broad and 2 cm. thick, smeared with vaseline, was placed on the outer aspect of the limb, and the plaster spiral carried over it. The splint was made to project 10 to 20 cm. beyond the plaster at either end. Extension was now applied manually, and the positions assumed by the turns of the spiral were retained by strings previously passed round them and tied to the upper and lower ends of the splint, which was notched for this purpose. The foot was always included in the bandage, and the knee preferably slightly flexed. If a wound lay in the position of the splint either the spiral turns were thickened so that the splint was separated from it, or an internal splint was applied.

This bandage required considerable technical ability in its application, and considerable time; but it was stated to afford good fixation with extension, a displacement of 8 cm. being readily reducible.

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## AMERICA'S CONTRIBUTIONS.

### THE AMERICAN ORTHOPAEDIC UNIT.

THE following are the members of the orthopaedic unit formed by the Surgeon-General of the United States Army, with the advice of Majors Goldthwait and Erving, for service in this country. All the members of the unit are placed at the disposal of Colonel Sir Robert Jones, Inspector-General of Military Orthopaedics, and all have arrived in this country with the exception of Dr. R. W. Johnson, who is expected in a few days. The first thirteen members whose names follow that of Major Erving in the following list, are all well-known orthopaedic surgeons, have been duly enlisted in the United States Reserve, and given the rank of captain. The remaining seven, who are of somewhat junior standing and have in some instances been acting as assistants to the seniors, are also enlisted officers in the United States Reserve, with the rank of lieutenant.

Major J. E. Goldthwait, *Director*, Boston, Mass.
Major W. G. Erving, *Assistant Director*, Washington, D.C.

Dr. C. R. Metcalf, Concord, N.H.
Dr. W. I. Baldwin, San Francisco, Ca.
Dr. A. R. MacAusland, Boston, Mass.
Dr. De Forest P. Willard, Philadelphia, Pa.
Dr. H. Winnett Orr, Lincoln, Neb.
Dr. S. M. Cone, Baltimore, Md.
Dr. M. S. Danforth, Providence, R.I.
Dr. C. F. Eikenbary, Spokane, Washington.
Dr. J. C. Graves, junr., Spokane, Washington.
Dr. Rhoades Fayerweather, Baltimore, Md.
Dr. F. C. Kidner, Detroit, Mich.
Dr. C. B. Francisco, Kansas City, Mo.
Dr. Wallace Cole, St. Paul, Minn.

Dr. R. C. Abbott, San Francisco, Ca.
Dr. Mitchell Langworthy, Chicago, Illinois.
Dr. Lewis Cass Spencer, Johns Hopkins Hospital, Baltimore, Md.
Dr. H. A. Durham, N.Y. Orthopaedic Dispensary and Hospital.
Dr. Custis L. Hall, Washington, D.C.
Dr. R. Wallace Billington, Nashville, Tenn.
Dr. Robert W. Johnson, junr., Baltimore, Md.

### THE HOSPITAL UNITS.

During the last two weeks we have given some account of the organization of the hospital units which have been arriving in rapid succession in this country from the United States. The sixth has now arrived, and is proceeding to France. Its official title is U.S.A. Army Hospital No. 12. It consists of officers, nurses, and men recruited in Chicago. The three administrative officers from the medical corps of the regular army who are at the head of it are Major C. C. Collins, commanding, Captain J. C. Magee, adjutant, and Captain J. A. Porter, quartermaster. The professional director is Major Frederic A. Besley, associate professor of surgery at the North-Western University, and with him as medical and surgical assistant directors respectively are Major Milton Mandel and Major Kellogg Speed. The staff includes eight captains and twelve first lieutenants in the medical reserve corps, and two first lieutenants in the dental reserve corps. The hospital company is mainly from the University of Chicago and the North-Western University in Chicago, with a few from other schools.

## HONOURS.

ON the occasion of his birthday the King has conferred the following honours and awards for distinguished services rendered in the field and elsewhere in connexion with the war:

*To be K.C.B.*

*Military.*—For services rendered in connexion with the war: Colonel James Magill, C.B., M.D. (ret. pay); Lieutenant-Colonel Peter Johnston Freyer, C.B., M.D., I.M.S. (ret.).

*To be C.B.*

*Military.*—For services rendered in connexion with the war: Surgeon-General George Welch, R.N.; Fleet Surgeon John Menary, M.D., R.N.; Colonels Charles Robert Tyrrell, A.M.S. (ret. pay); Douglas Wardrop, C.V.O., M.B., A.M.S. (ret. pay); temporary Colonel James Galloway, M.D., F.R.C.P., F.R.C.S., A.M.S.; Lieutenant-Colonel and Brevet-Colonel Sir Bruce Gordon Seton, Bt., I.M.S.; Surgeon-Lieutenant-Colonel Sir Warren R. Crooke-Lawless, C.I.E., M.D. (ret. pay), R. of O. (employed R.A.M.C.); Surgeon-Lieutenant-Colonel (honorary Surgeon-Colonel) Richard James Reece, M.D., H.A.C.; Major and Brevet-Lieutenant-Colonel (temporary Brigade-General) Auckland Campbell Geddes, M.D. (Unattached List).

For military operations in the field: Colonels Roger Kirkpatrick, C.M.G., M.D., A.M.S.; Charles Henry Burtchaell, C.M.G., M.B., A.M.S.; John Joseph Gerrard, M.B., A.M.S. Temporary Colonel William Henry Willcox, C.M.G., M.D., F.R.C.P. Lieutenant-Colonels (temporary Colonels): George Washington Brazier-Creagh, C.M.G. (ret. pay), late R.A.M.C.; Hugh Stanley Thurston, C.M.G., R.A.M.C.

*Civil.*—For services rendered in connexion with the war: Temporary Surgeons-General Sir William Macewen, M.D., R.N., and George Robertson Turner, F.R.C.S., R.N.

*To be K.C.M.G.*

For services rendered in connexion with military operations in the field: Surgeons-General Sir Arthur Thomas Sloggett, K.C.B., C.M.G., K.H.S.; Francis Harper Treherne, C.M.G.; Tom Percy Woodhouse, C.B.

For services rendered in connexion with the war: Colonel Robert Neil Campbell, C.B., C.I.E., I.M.S.(ret.).

*To be C.M.G.*

For services rendered in connexion with military operations in the field:—Colonels: Alfred William Bewley, A.M.S.; Courtenay Clarke Manifold, C.B., M.B., I.M.S.; Denis Moriarty O'Callaghan, A.M.S.; Reuter Emeric Roth, D.S.O., A.A.M.C. Lieutenant-Colonels (temporary Colonels): Frederick James Greig (ret. pay), R. of O., late R.A.M.C.; John Colpoys Connor, M.B., R.A.M.C. Lieutenant-Colonels: Andrew Hosie, M.D. (ret. pay), late R.A.M.C.; George Scott, M.B. (ret. pay), late R.A.M.C. Temporary Lieutenant-Colonel Arthur Dawson Milne, M.B., East Africa Medical Service. Major (temporary Lieutenant-Colonel) R. J. Campbell Thompson, D.S.O., R.A.M.C.

For services rendered in connexion with the war:—Fleet Surgeon George Thompson Bishop, R.N. Colonels: Charles Alfred Hodgetts, C.A.M.C.; Reginald Jeffrey Millard, A.A.M.C. Lieutenant-Colonels: Joshua Chaytor-White, M.D., I.M.S. (ret.); David Harvey, M.D., R.A.M.C.; William Thornborough Hayward, A.A.M.C.; Thomas Ernest Victor Hurley, A.A.M.C.; John Norman MacLeod, C.I.E., M.B., F.R.C.S., I.M.S. (ret.); Francis Frederic Perry, C.I.E., F.R.C.S., I.M.S. (ret.); Sidney Browning Smith, I.M.S.; Terence Humphreys Sweeny, F.R.C.S.I., I.M.S. (ret.). Temporary Honorary Lieutenant-Colonel Mervyn Henry Gordon, M.D., R.A.M.C. Majors: Patrick Stanislaus O'Reilly, R.A.M.C.; George Alfred Duncan Harvey, R.A.M.C. Temporary Major Archibald Douglas Reid, R.A.M.C.

*Promotions.*

To be Surgeon-General: Colonel (temporary Surgeon-General) W. W. Pike, C.M.G., D.S.O., F.R.C.S.I.

To be Brevet Colonels: Lieutenant-Colonel S. L. Cummins, C.M.G., M.D., R.A.M.C.; Lieutenant-Colonel (temporary Colonel) G. T. K. Maurice, C.M.G., R.A.M.C.

To be Brevet Lieutenant-Colonel: Major P. H. Henderson, D.S.O., M.B., R.A.M.C.

To be Brevet Majors: Captain D. M. Corbett, M.B., R.A.M.C.; Captain (acting Lieutenant-Colonel) B. Johnson, M.B., R.A.M.C.; Captain H. F. Panton, M.C., M.B., R.A.M.C.

To be honorary Lieutenant-Colonel: Quartermaster and honorary Major J. B. Short, R.A.M.C.

To be honorary Major: Quartermaster and honorary Captain E. J. Buckley, R.A.M.C.

*D.S.O.*

Lieutenant-Colonels (temporary Colonels): John Donald Alexander, M.B., R.A.M.C.; Arthur Winniett Nunn Bowen, R.A.M.C.; Peter MacKessack, M.B., R.A.M.C.; Standish de Courcy O'Grady, M.B., R.A.M.C.; Malcolm MacGregor Rattray, M.B., R.A.M.C.; Constantine T. C. de Crespigny, A.A.M.C.; William Weston Hearne, A.A.M.C.; Robert Beveridge Huxtable, A.A.M.C.

Lieutenant-Colonels (acting Colonels): James Geoffrey Gill, R.A.M.C., and Henry Herrick, R.A.M.C.

Lieutenant-Colonels: Harold John Kinahan Bamfield, I.M.S.; Harry Nairn Butler, A.A.M.C.; Harold Benn Fawcus, C.M.G., M.B., R.A.M.C.; Robert L. Girdwood, S.A.M.C.; Gerald Hamilton Goddard, R.A.M.C.; William Belfry Hendry, C.A.M.C.; Cyril Henry Howkins, R.A.M.C.; Chester Fish McGuffen, C.A.M.C.; John Douglas McQueen, C.A.M.C.; Edward W. P. V. Marriott, R.A.M.C.; Arthur Hamilton Tebbutt, A.A.M.C.; Charles Perry Templeton, C.A.M.C.; Herbert Wynne Vaughan-Williams, S.A.M.C.; Anthony Henry Waring, R.A.M.C.; Edward Johnston Williams, C.A.M.C.; Edwin Arnold Wraith, R.A.M.C.

Temporary Lieutenant-Colonel David Dale Logan, M.D., R.A.M.C.

Majors (temporary Lieutenant-Colonels): David Ahern, R.A.M.C.; Benjamin Howard Vella Dunbar, M.D., R.A.M.C.; George Herbert Leonard Hammerton, R.A.M.C.; Harold Crossley Hildreth, F.R.C.S., R.A.M.C.; John Matthews, R.A.M.C.; John Edward Powell, R.A.M.C.; Thomas P. Puddicombe, M.B., R.A.M.C.; Henry Rogers, M.B., R.A.M.C.; David Rorie, M.D., R.A.M.C.; Hugh Stewart, M.C., M.B., R.A.M.C.; Richard Melbourne West, M.D., R.A.M.C.; Thomas James Wright, R.A.M.C.

Major (acting Lieutenant-Colonel) Robert Norman Pringle, S.A.M.C.

Majors: Roland Harley Bridges, R.A.M.C.; George Cumming Byrne, A.A.M.C.; George Edwards Cole, A.A.M.C.; William Angus Fraser, A.A.M.C.; George Ernest Gask, F.R.C.S., R.A.M.C.; Raymond Meyers Gorssline, C.A.M.C.; Edward Temple Harris, M.B., I.M.S.; John Stephen Jenkins, C.A.M.C.; Cyril Leslie S. Macintosh, A.A.M.C.; James Sydney Pascoe, R.A.M.C.; John Duncan Richmond, M.B., R.A.M.C.; George Faber Sheehan, R.A.M.C.; Samuel Boylan Smith, M.D., R.A.M.C.; Thomas D. Macgregor Stout, N.Z.M.C.; Roy William W. Walsh, A.A.M.C.; Charles Henry Watson, I.M.S.; Herbert Locksley St. V. Welch, A.A.M.C.; Walter John Weston, R.A.M.C.

Temporary Major (temporary Lieutenant-Colonel) Edward Lake Gowlland, M.B., R.A.M.C.

Captains (acting Lieutenant-Colonels): Henry King Dawson, M.D., R.A.M.C.; Philip Gordon Moss Elvery, M.C., R.A.M.C.; Alexander Donald Fraser, M.C., M.B., R.A.M.C.; Archibald Smith Littlejohns, R.A.M.C.; G. Mackie, R.A.M.C.; Robert Magill, M.B., R.A.M.C.(S.R.); Charles Reade Monroe Morris, M.B., R.A.M.C.; Kenneth Duncan Murchison, M.B., R.A.M.C. (S.R.); Arthur Drought O'Carroll, M.B., R.A.M.C.; Gerald Hoey Stevenson, M.B., R.A.M.C.; Murray Ross Taylor, M.D., R.A.M.C.(S.R.); Alan Geoffry Wells, R.A.M.C.

Captain (temporary Major) Richard Stopford Taylor, M.B., F.R.C.S., R.A.M.C.

Captains: Francis Casement, M.B., R.A.M.C.; John Golding, R.A.M.C.; Hyman Lightstone, M.C., R.A.M.C.; Arthur Hunter Powell, A.A.M.C.; Arnold Newall Thomas, M.B., I.M.S.

Temporary Captain (acting Lieutenant-Colonel) Lawrence Drew Shaw, R.A.M.C.

Temporary Captains: Phillip Henry Bahr, M.D., R.A.M.C.; James Jameson Dwyer, R.A.M.C.; John Richardson Marrack, M.C., M.B., R.A.M.C.; Robert Bruce Wallace, M.B., R.A.M.C.

Lieutenant Nilkranth Skriram Jatar, I.M.S.

Second Lieutenant (temporary Captain) Marcus Beresford Heywood, M.D., Yeomanry.

*Awarded the Military Cross.*

Captains: L. B. Baird, R.A.M.C.; J. H. Bayley, R.A.M.C. (S.R.); R. A. Broderick, R.A.M.C.; A. E. Bullock, R.A.M.C.; J. M. A. Costello, R.A.M.C.; G. Dalziel, R.A.M.C.(S.R.); W. T. Gardiner, R.A.M.C.; W. George, R.A.M.C.; R. H. M. Hardisty, C.A.M.C.; P. Hartley, R.A.M.C.; A. S. Heale, R.A.M.C.; L. H. W. Iredale, R.A.M.C.(S.R.); A. C. C. Johnston, C.A.M.C.; D. R. King, R.A.M.C.(S.R.); J. C. Metcalfe, R.A.M.C.; J. R. Mitchell, R.A.M.C.; H. W. F. Mitchell, A.A.M.C.; R. E. U. Newman, R.A.M.C.; M. W. Paterson, R.A.M.C.(S.R.); G. S. Robinson, A.A.M.C.; D. J. Scott, R.A.M.C.; C. F. Searle, R.A.M.C.; O. Teichmann, R.A.M.C.; C. T. Turner, A.A.M.C.; W. G. Turner, C.A.M.C.; F. L. Wall, A.A.M.C.; L. T. Whelan, R.A.M.C.; J. St. G. Wilson, R.A.M.C.

Surgeon-Captain E. G. Storrs, Rhodesian Medical Service.

Temporary Captains: G. O. F. Alley, R.A.M.C.; J. H. Box, R.A.M.C.; J. V. Brown, R.A.M.C.; L. G. Brown, R.A.M.C.; E. R. C. Cooke, R.A.M.C.; N. J. H. Gavin, R.A.M.C.; D. Hardie, R.A.M.C.; J. T. Hurst, R.A.M.C.; A. Jones, R.A.M.C.; D. Kelly, R.A.M.C.; G. N. Lorimer, R.A.M.C.; J. T. McKenzie, R.A.M.C.; R. P. McNeill, S.A.M.C.; H. Moore, R.A.M.C.; A. S. Plant, R.A.M.C.; R. A. W. Proctor, R.A.M.C.; W. K. A. Richards, R.A.M.C.; A. D. Sharp, R.A.M.C.; A. V. Short, N.Z.M.C.; H. S. Sugars, R.A.M.C.; C. G. Sutherland, C.A.M.C.; W. B. Wamsley, R.A.M.C.

Lieutenant R. Ellis, R.A.M.C.(S.R.).

Sergeant-Major A. Kaufman, R.A.M.C.

Yuzbashi Wadia Effendi, Tanuis Ghusn Medical Corps, Egyptian Army.

MENTIONED IN DISPATCHES.

The following additional medical officers are included in the lists contained in Sir Douglas Haig's dispatch as deserving of special mention.

AUSTRALIAN IMPERIAL FORCE.

*Staff.*

Colonels: G. W. Barber, D.S.O.; A. Sutton, C.M.G.

Lieutenant-Colonel (temporary Brigade General) W. W.

Hearne; Lieutenant-Colonel (temporary Colonel) R. B. Huxtable.
Majors: L. W. Jeffries, D.S.O., J. J. Nicholas.

*Army Medical Corps.*
Colonel R. E. Roth, D.S.O., V.D.
Lieutenant-Colonels: H. N. Butler, J. Corbin, C. T. C. de Crespigny, H. S. Stacey, A. H. Tebbutt, M. L. Williams (died of wounds).
Majors: A. S. D. Barton, G. C. Byrne, J. P. Kenny, E. F. Lind, G. W. Macartney, C. L. S. Macintosh, C. W. Thompson, M.C., R. W. W. Walsh, H. L. St. V. Welch, A. M. Wilson.
Captains: M. J. Holmes, A. O. Howse (temporary Major), N. E. B. Kirkwood, J. McCusker, I. Morgan, A. H. Powell, S. A. Railton, H. O. Teague (killed), G. C. Willcocks.

CANADIAN FORCES.
*Staff.*
Lieutenant-Colonel C. P. Templeton, C.A.M.C.
Majors: R. M. Gorssline and J. S. Jenkins, C.A.M.C.

*Canadian Army Medical Corps.*
Colonel J. T. Fotheringham, C.M.G.
Lieutenant-Colonels: K. Cameron, J. M. Elder, C. F. McGuffen, J. D. McQueen, G. R. Philp, G. H. Wilson, C. F. Wylde.
Majors: A. T. Bazin, P. G. Bell, C. H. Dickson, A. L. C. Gilday, G. S. Mothersill.
Captains: T. H. Bell, H. Buck, J. C. Clarke, A. W. M. Ellis, D. B. Kennedy, C. Kerr, W. G. Lyall, A. McCausland, R. R. McClenahan, H. R. Mustard.
Lieutenant (temporary Captain) A. F. Laird, M.D.

NEW ZEALAND FORCE.
*Head Quarters Staff.*
Lieutenant-Colonel (temporary Colonel) D. J. McGavin, M.D., F.R.C.S., N.Z.M.C.

*Medical Corps.*
Lieutenant-Colonel J. Hardie-Neil.
Major T. D. M. Stout, F.R.C.S.
Captain W. G. Borrie, M.B.

SOUTH AFRICAN CONTINGENT.
*South African Medical Corps.*
Major (acting Lieutenant-Colonel) R. N. Pringle, M.B.
Temporary Major C. M. Murray, M.B.

INDIAN ARMY.
*Indian Medical Service.*
Colonel C. C. Manifold, C.B., M.B.
Lieutenant-Colonel H. J. K. Bamfield.

Among the names received too late to be included under their respective units are those of Captain (temporary Lieutenant-Colonel) D. B. Chiles-Evans, D.S.O., R.A.M.C. S.R. (killed), and Captain J. R. N. Warburton, R.A.M.C. S.R.

## FOREIGN DECORATIONS.

The following medical officers are included in the list of officers upon whom the Allies have conferred decorations for distinguished services rendered during the course of the campaign:

ITALY.
*Order of St. Maurice and St. Lazarus.*
Cavalier: Lieutenant-Colonel William Weston Hearne, A.A.M.C.

*Order of the Crown of Italy.*
Commander: Surgeon-General William Grant Macpherson, C.B., C.M.G., M.B., K.H.P.

*Silver Medal for Military Valour.*
Captain Howard Hampton Burnham, C.A.M.C.
Temporary Captains Hugh Noel Murray Puckle, M.B., R.A.M.C., Maitland Scott, R.A.M.C., and Charles McMoran Wilson, M.C., M.D., R.A.M.C.

The bronze medal for military valour has been conferred upon eight non-commissioned officers and privates of the R.A.M.C., and also upon two privates of the Colonial Medical Corps.

FRANCE.
*Croix de Chevalier.*
Surgeon-General E. Fiset, Canadian Permanent Force.
Lieutenant-Colonel A. E. Le Bel, C.A.M.C.

*Légion d'Honneur—Croix de Guerre.*
Colonel S. Macdonald, C.M.G., A.M.S.
Lieutenant-Colonel H. B. Fawcus, C.M.G., M.B., R.A.M.C.
Captain S. J. Linzell, R.A.M.C.
Temporary Captains: R. W. P. Jackson, A. G. Maitland-Jones, V. M. Rich, A. G. H. Smart, R.A.M.C.

RUSSIA.
*Order of St. Anne, First Class (with Swords).*
Surgeon-General Menus William O'Keefe, C.B., M.D.

# CASUALTIES IN THE MEDICAL SERVICES.

## ARMY.

*Killed in Action.*

CAPTAIN W. G. CUMMINGS, R.A.M.C.(T.F.).

Captain William Gordon Cummings, R.A.M.C.(T.F.), whose death was recorded in our issue of last week, was reported as killed in action in the casualty list published on May 30th. He was 36 years of age, was a native of Dungannon, co. Tyrone, and was educated at Queen's College, Belfast. He graduated M.B., B.Ch., and B.A.O. of the Royal University of Ireland in 1903, and subsequently obtained the D.P.H. After acting as resident medical officer of the Richmond Hospital, Dublin, he settled in practice twelve years ago at Hanwell, and was a member of the Ealing Division of the British Medical Association. He joined the R.A.M.C. Territorial Force in January, 1915. In a letter to Mrs. Cummings informing her of the instantaneous death of her husband, the A.D.M.S. of his division wrote: "He was struck by a shell which exploded in the dug-out in which he was attending to the wounded. I feel his loss deeply, as he was an officer of whom I had formed the highest possible opinion, and on whom I placed the greatest reliance. He was always cheery under the most adverse circumstances. Such an officer the R.A.M.C. can ill afford to lose."

LIEUTENANT R. W. W. VAUGHAN, R.A.M.C.

Lieutenant Robert William Walter Vaughan, R.A.M.C., killed in action on May 22nd, was the only son of the late Rev. T. W. Vaughan, Vicar of Rhuddlan and Rural Dean of St. Asaph. He was educated at University College, London, taking the diplomas of M.R.C.S. and L.R.C.P. Lond. in 1908, and graduated M.B., B.S.Lond. in 1910. After acting as house-surgeon of Cardiff Infirmary, he became assistant medical officer of the Banstead Asylum, Sutton, Surrey, a post which he held till he recently took a temporary commission in the R.A.M.C.

*Died on Service.*

CAPTAIN B. R. BAKER, C.A.M.C.

Captain Basil Rupert Baker, Canadian Army Medical Corps, died at Chatham House Annexe, Ramsgate, on May 9th, aged 39. He was the youngest son of the late Rev. Charles Coryndon Baker, D.D., of Newnham Rectory, Hook, Hampshire.

CAPTAIN S. D. RATNAGAR, I.M.S.

Captain Sorab Dhunjibhoy Ratnagar, Indian Medical Service, died of enteric fever at Dera Ismail Khan on April 25th, aged 32. He was born on September 7th, 1884, educated at the London Hospital, and took the Scottish triple qualification in 1911. Entering the I.M.S. as lieutenant on July 27th, 1912, he was promoted to captain on July 27th, 1915.

*Wounded.*

Major N. J. Bullen, Australian A.M.C.
Captain F. M. Hughes, R.A.M.C. (temporary).
Captain W. J. J. Lawson, R.A.M.C.(T.F.).
Captain G. Thomson, R.A.M.C. (temporary).
Captain F. R. Thornton, M.C., R.A.M.C. (temporary).
Lieutenant L. C. G. Bacon, R.A.M.C. (temporary).
Lieutenant T. Burrett, R.A.M.C. (temporary).
Lieutenant and Quartermaster W. J. C. Merriman, R.A.M.C.

DEATHS AMONG SONS OF MEDICAL MEN.

Carless, Hugh Dobbie, Second Lieutenant Gordon Highlanders, younger and only remaining child of Professor Albert Carless, F.R.C.S., King's College Hospital, London, temporary Lieutenant-Colonel R.A.M.C., died of wounds on April 24th, aged 19. He was educated at St. Clare School, Upper Walmer, and at Westminster School, where he was a King's scholar, and just before the war began had entered at Trinity College, Cambridge, intending to take orders. He enlisted in the London Scottish in November, 1914, and after serving for eight months in the ranks, received a commission in the Gordons. He went to the front in May, 1916, was wounded in July, and returned to the front last January. His elder brother, Lieutenant A. W. B. Carless, Middlesex Regiment, died of wounds received in the battle of Loos in September, 1915.

Dunwoody, John Miles, Second Lieutenant Royal Dublin Fusiliers, only son of Dr. Dunwoody, of Ramsgate, reported

as missing, believed drowned, in the loss of the transport *Transylvania* on May 4th, aged 20. His commission was dated April 9th, 1915.

Ezard, Herbert Henry, Second Lieutenant, attached Royal Flying Corps, accidentally killed while flying at an aerodrome in the West of England on May 30th, aged 25. He was the elder son of Dr. E. H. Ezard, honorary secretary of the Cambridge and Huntingdon Branch of the British Medical Association, was educated at Abraham Colfe's School, Lewisham, and subsequently went to Canada. He returned to England with the Canadian Forces in 1915, was transferred to the R.F.C. and obtained his commission three weeks before his death.

Hamilton, Henry Edmund Redmond, Captain Canadian Railway Troops, elder son of Dr. Hamilton, of Barnes, killed May 19th. He got a commission in December, 1916.

Hopkinson, Eric Humphry, M.C., Lieutenant Cambridgeshire Regiment, second son of Dr. Albert Hopkinson, of Withington, Manchester, reported as wounded and missing on June 2nd, 1915, two years ago, now reported as having died of wounds on that day. He was educated at Rugby, where he was head of his house, and gained the King's medal and the Lees-Knowles leaving exhibition, also gaining an open scholarship in history at Trinity College, Cambridge, before he took a commission on October 8th, 1914.

Jenkins, Christopher H., Captain Royal Sussex Regiment, youngest son of the late Dr. Jenkins and of Mrs. Jenkins, of West Ealing, died of wounds May 22nd, aged 19.

Mantle, Alexander, Lieutenant London Regiment, younger son of Dr. Mantle, of Harrogate, killed in action on May 22nd. He was 20 years of age, and had a distinguished career at Rugby School, which he left to enter Caius College, Cambridge, for an arts and medical degree. At the outbreak of war he entered the Inns of Court O.T.C., obtained his commission in April, 1915, was promoted full lieutenant in the following September, and went to the front six months ago. His adjutant writes: "His personality was one which for charm and sweetness could scarcely be equalled. Keen and absolutely fearless as a soldier, he was literally loved by the men who worked under him, and there is no officer or man in the brigade whose death could come as a more bitter loss to his friends and subordinates." His elder brother, Captain Mantle, was wounded in France five weeks ago, and is now in a London hospital.

Warner, Bernard Oldershaw, Lieutenant Essex Regiment, youngest son of the late Dr. Percy Warner, of Woodford Green, killed May 19th. He was educated at Berkhamsted, and articled to Messrs. Price, Waterhouse, and Co., passing his final examination in 1914. At the beginning of the war he rejoined the Artists Rifles, of which he had been a member, and went to the front. After being invalided home, he got a commission on April 25th, 1915, in the Essex Regiment, and served in Gallipoli. He was wounded on July 1st, 1916, and returned to the front on April 27th.

MEDICAL STUDENT.

Sinclair, George S., Lieutenant Royal Irish Rifles, second son of the late Samuel Sinclair, of Belfast, and nephew of Colonel T. Sinclair, C.B., A.M.S., killed May 28th. Before the war he had entered Queen's University, Belfast, as a medical student, with a scholarship, which he resigned in order to serve as a combatant. His commission was dated April 30th, 1915. He had taken part in many engagements, and at the storming of Moislains was the first British soldier to enter that stronghold.

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Second Lieutenant Wilfrid B. Cramb, Argyll and Sutherland Highlanders, attached to the Royal Flying Corps, is reported missing on April 14th. His machine had been observed well over the German lines under very heavy anti-aircraft fire. He was educated at the Glasgow High School and was a third year medical student at Glasgow University. He was well known in motor-cycle circles and the Scottish six days' trials. In September, 1914, he went to France with the first unit of the Scottish branch of the British Red Cross Society, and was employed with motor ambulances; several suggestions in the design of motor ambulances submitted as the result of his early experience have been adopted. He received his commission in the Argyll and Sutherland Highlanders in 1915 and saw service till January, 1917, when he was attached to the Royal Flying Corps, and had been flying in France for six weeks. He is a nephew of the late Professor Cramb, the author of *Germany and England*.

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[*We shall be indebted to relatives of those who are killed in action or die in the war for information which will enable us to make these notes as complete and accurate as possible.*]

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THE Medical and Chirurgical Faculty of Maryland has created a fund of £2,000, to be known as the Osler Testimonial Fund, the income of which is to be applied to the purchase of books for the faculty library and for the upkeep of the hall which bears the name of Sir William Osler.

THE German Ministry for the Interior has recently issued a warning from which it appears that it is believed that the abuse of morphine is increasing. Doctors and the police are urged to keep a watch over morphine in drug stores and other businesses, and the former are enjoined not to allow nurses to have charge of, or administer, the drug.

# Scotland.

CONTROL OF VENEREAL DISEASE.

THE Local Government Board for Scotland has just issued a circular to Scottish local authorities with regard to the preparation of schemes for the diagnosis, treatment, and prevention of venereal diseases, in accordance with the Order issued by the Board last October. The circular offers guidance on such matters as the collection and disposal of pathological specimens; the treatment of patients in their homes in special circumstances; and the use of substitutes for salvarsan, of which kharsivan, arsenobillon, novarsenobillon, diarsenol, and galyl have been approved. A memorandum on the keeping of records and reports by institutions is appended, together with specimen forms and leaflets for the use of medical practitioners, pathologists, local authorities, and patients. Among the latter is a draft form of public notice for insertion in local newspapers, and display in workshops and offices. The Board draws special attention to the urgent need, as revealed by the report of the Royal Commission, for the taking of all practical measures to cope with these diseases.

PROPOSED MINISTRY OF HEALTH.

A discussion on the proposed Ministry of Health took place on June 1st at the Shepherds' Conference in Dunfermline. Mr. Alexander Calvert (Glasgow) said that health questions had a most important effect on the finances of the society. The original tables were largely framed on the then ordinary sickness experience under much better health conditions than those now available. In the country four millions of people were living under sanitary conditions suitable only for half a million, and a scheme for housing should occupy the attention of the Government at the earliest opportunity, and friendly societies must take an interest in that question. A Ministry of Health which looked better after the appalling infantile mortality would reduce the death-rate considerably in a few years, but it must have nothing to do with the Local Government Board, for bumbledom should be excluded. Parish councils and boards of guardians had been hampered by the Local Government Board. A Ministry of Health must stand on its own legs, and not be connected with that antediluvian body. Other speakers took the same view, and Mr. Grieve, of Glasgow, said that there was just a possibility that the Ministry of Health might be created without the friendly societies having any say in the matter. The Local Government Board during the seventy years of its existence had been behind the times, and had not fulfilled the duties entrusted to it. If it had, the housing problem would not be in the condition in which it was now. Mr. Marsh, representative of South Wales, said that the proposal ought to be carefully watched, for some of them knew the author of the scheme. Eventually the matter was referred to the Executive Committee to take the necessary steps to safeguard the interests of the society.

REGISTRATION OF NURSES.

At a meeting of the Association for the Promotion of the Registration of Nurses in Scotland, held in Edinburgh on May 31st, a resolution adopted on November 24th, 1916, was reaffirmed in the following terms:

> That the Association for the Promotion of the Registration of Nurses in Scotland protests against the action of the Central Committee for the State Registration of Nurses in London in determining (1) to break off negotiations with the College of Nursing, Ltd., at a time when unanimity of action seemed so hopeful, and (2) to proceed with its own bill without having first consulted the members of the associations represented on the Central Committee in view of the fact that substantial progress in the negotiations between the two bodies towards an agreed bill seems to have been achieved.

The Executive Committee strongly recommends members of the Association for the Promotion of the Registration of Nurses in Scotland not to sign any petition to the Prime Minister such as is at present being circulated by the Society for the State Registration of Trained Nurses, 431, Oxford Street, London.

# Ireland.

NATIONAL BABY WEEK FOR IRELAND.

AT a meeting in connexion with National Baby Week, called by the Women's National Health Association on May 31st, in the Mansion House, Dublin, when the Lord Mayor was in the chair, Sir Andrew Horne, F.R.C.P., said that 16 per cent. of the infants born annually in Dublin, and in perfect health at the time of their birth, died before reaching the age of one year. Poverty, ignorance, and improper feeding were the three chief causes of the infantile mortality in Dublin. The great problem before the city of Dublin was the milk question. On one day he saw that there were no less than five or six prosecutions of milk vendors in Dublin. The prosecutions were not for impure milk, but for adulterated milk. No attention, apparently, was paid to impure milk. Lieutenant-Colonel William Taylor, President of the Royal College of Surgeons, moved the following resolution, which was passed unanimously:

> That, as a Baby Week campaign is essential for the welfare of the nation, it is desirable to organize one in Dublin and throughout Ireland from July 1st to 7th, 1917, and that in connexion with it a representative baby health conference be held in Dublin, the Local Government Board being asked to approve of local authorities incurring the expense of sending delegates to such conference, providing that any local authority availing itself of the privilege has already a child welfare scheme in operation, or such a scheme in contemplation.

Dr. Mabel Crawford said that education was the main object of Baby Week. That improvement could be effected by making and enforcing efficient legislation had been proved in one town in America, where a reduction of the bacteria in milk by 80 per cent. had been followed by a fall of one-fourth in the deaths of infants from diarrhoeal diseases. It would take a long time to make the milk supply of Dublin satisfactory from the bacteriological point of view, and in the meantime milk dépôts should be set up in the city.

# Correspondence.

## THE CO-ORDINATION OF BRITISH MEDICAL POLICY.

SIR,—When the amateurs are ready again to enter upon the modification of medical practice, what are the defensive forces on which we shall rely, not only for our own protection, but the protection of the people of the empire, who are, when all is said and done, our medical charge? We may be sound in principle, wise in policy, but, if unsatisfactorily organized, we shall be beaten, as we were beaten over the Insurance Act.

There must obviously be some satisfactory corporate body capable of speaking and acting for the profession if it is to have a chance of success. Our choice seems to lie between:

The British Medical Association.
Certain (much smaller) associations or guilds.
Some (non-existent) great trade union.
Some (non-existent) alliance of colleges and universities.

The corporate body we want must be large and representative, and the time, I am sure, is short. Does any one really suppose we shall be able to grow *de novo* a great representative body in a few months? It has taken many years to make the British Medical Association what it is. It is plain nonsense to attempt such a construction, and we must use what we have. In other words, *we must rely on the British Medical Association.*

But the Association has recently failed us at our need, and I believe, as it stands, it will fail us again. And the question becomes the urgent one:

*How can we reconstitute it to give a better chance of success?* We must get on. We have little time to waste. What have we learnt to guide us? We want economy, sound business management, the best brains the profession holds, the removal of the stigma of "trade unionism."

What has the Association accomplished since the fatal days when it changed its constitution, wasted its big reserve fund, began to waste its income, alienated many of its ablest members, and in place of posing as a great public-spirited association of professional men clad itself in the garb of the "war-strikers' parliament"? If we are to do any good we must undo all this. I am sorry if I hurt any of my friends by what I am saying. It has to be said by somebody. What we need are:

1. *A first-rate business secretary*—a business man (not a medical man whose profession this is not) carefully chosen for proved ability in management of important concerns and well paid—preferably a legal man.

2. *Cessation of financial waste*, in order as fast as possible to accumulate from our great income a considerable fighting fund. By this I mean cessation of payment of members for attendances at Representative Meetings and Council Meetings—we used to have excellent men when there was no payment—reduction of such committees as really need payment (owing to frequent and onerous business) to the smallest number really needed, reduction of unnecessary expense in printing and paper.

3. *Reduction to manageable numbers of the present Representative Meeting*—eighty members would be ample.

4. *Abolition of the principle of "delegation."* If medical men cannot be trusted honestly to "represent" constituencies we must indeed be in a bad way.

5. *Calling to our councils the best brains of the profession*, the eminent men who are interested in its welfare but who now stand aloof from what is virtually a trade union, and a bad failure at that.

Let us be quite clear about one thing. It is useless to try to govern or lead medicine by trade unionism, even if it were decent or moral to do so. We British doctors are not a group of self-seeking artizans. We hold in the hollow of our hand the health and happiness of the greatest of empires. No more tremendous responsibility in peace time devolves on any section of the community. To take as our model, in ordering our steps, the classes who have not enjoyed our advantages of education, tradition, and responsibility is, to my mind, as foolish as it is wrong. The basis of trade unionism is physical force. Can we do "peaceful picketing"? For such a calling as ours there can be only one final appeal—namely, to personal honour and an enlightened public conscience. Such should exist amongst us. In this war what record is more honourable than medicine's?

Nor does the Association exist by its trade unionism. It exists as it always has existed—because of its scientific and social functions. Take away its admirable JOURNAL and see how many members will remain. Its recent trade unionism is only a noxious parasite which has grafted itself on the real tree and is sapping its vitality. I would say, pluck it off, and let us once more have an association of cultivated men, respecting themselves and their art, fully alive to their responsibilities, desirous to carry into peace time the patriotism which has been patent to all the world in war, eager to improve their knowledge, not merely for their own advantage, but for that of humanity. The public will quickly enough recognize that fundamental change. The Association will then be able to speak—for the nation first, for itself afterwards. Against such an organization the intrigues of interested politicians will have far less chance of success. With such an Association, statesmen who honestly desire to solve the problems of the medical care of the country, on sound scientific lines, will find themselves immediately in sympathetic collaboration.—I am, etc.,

Exeter, June 3rd. W. GORDON.

## THE RECONSTRUCTION OF THE PUBLIC HEALTH SERVICE.

SIR,—Anything more remote from practical politics than the scheme of reconstruction of the Public Health Service adumbrated by the Council in the SUPPLEMENT to the JOURNAL of May 5th can hardly be conceived.

Take, for example, the constitution of the local authority for public health administration. "The local administrative health committee should consist of representatives (*a*) of the rating authorities, (*b*) of the education authorities, (*c*) of the persons contributing to a scheme of health insurance (including in this employers of labour), (*d*) the medical profession, (*e*) public hospitals, (*f*) dentists, (*g*) pharmacists, and (*h*) nurses." Does the Council for one moment imagine that the electorate will surrender

their right of electing their representatives to manage their affairs in order to establish the hybrid body which is suggested? If they do they much misjudge the mentality of the electorate.

Then, is the Council unaware that the most pressing problem of public health administration is that of housing and town planning, with all that is involved in the latter phrase? For the solution of that problem their scheme makes no provision and yet it is fundamental.

There are to be "representatives of the rating authorities." What "rating authorities"? "Representatives of the education authorities"! Why? Their business is education, and it is a big enough business in all conscience at this juncture. There are to be representatives of "dentists" and of "pharmacists." But in the body which is to have control of dairies and dairy herds there is to be no representative of the veterinary profession; in a body which will be charged with the administration of the Food and Drugs Act, why—on the lines the Council have adopted—no representative of the Society of Analysts?

Any one who has had any practical experience in local administration knows that, given large enough areas, a board consisting of practical business men, with competent professional advisers, is calculated to do the best work, and is most consonant with the genius of the nation. The "Committee" the Council proposes to establish would constitute an excellent debating society, but as an administrative entity it is beneath contempt.

"The administrative functions of the Ministry of Health should be carried out by a board"! I fancy the country will prefer a Minister of Health, solely and individually responsible for the public health administration of the country, to a glorified debating society.

But the whole scheme is a farrago of impracticability.—I am, etc.,

A. CAMPBELL MUNRO, M.B., M.R.C.P.Ed., D.Sc.

Paisley, May 22nd.

## THE LIFE-HISTORIES OF THE LOWER BACTERIA.

SIR,—Permit me to acknowledge with much appreciation the courtesy and generosity of Dr. E. C. Hort's letter in the JOURNAL of May 19th, drawing attention to my early work in relation to this subject.

The morphological modifications which appear in *B. typhosus* and some other bacteria, when subjected to particular environments, were studied by W. Murray and myself in 1902 and 1903 in the Gordon Laboratory of Experimental Pathology at Guy's Hospital, and I continued to give a good deal of attention to the subject here during several subsequent years. I am familiar with the "aberrant" forms described by Dr. Hort. In a short paper published in this JOURNAL[1] (July, 1904) Murray and I drew particular attention to the following forms among those which we had noted: (1) Long unsegmented filaments, (2) filaments with segmentation at one end or in some part of their length, (3) beaded forms (presenting deeply staining beads at intervals along their length), (4) coccoid forms, (5) giant forms, (6) felted networks of filaments, (7) branching filaments.

Somewhat similar results were obtained (with *B. typhosus* and *Vib. cholerae*) by quite different methods by Professor Almquist of Stockholm, who published, in the same year, an account of them in a paper entitled "Neue Entwickelungsformen des Choleraspirills und der Typhusbakterie."[2]

Murray and I concluded our own description with the following statement:

> We are not at present prepared to estimate the precise importance of the foregoing observations. . . . But we conclude that the form in which we ordinarily see the *Bacillus typhosus* and some other bacteria in the laboratory is not the only form in which they may appear. Perhaps it may not even be the form in which by preference they exist as saprophytes. Further experiments which are now in progress suggest the possibility of an unsuspected complexity in the life-history of these micro-organisms. . . .

Some of the results of my further experiments were demonstrated in the Pathological Museum of the Oxford meeting of the Association in the summer of 1904, including appearances suggestive of "budding," oval and spherical forms, and the presence of tiny highly motile forms which I called "dots." But I have hitherto been unable to convince myself that I had evidence of a complete life-history, or to find a satisfactory method of securing permanent and demonstrable preparations of certain phases. Of this, however, I am certain: that any one who is interested in the matter can easily obtain filamentous forms of *B. typhosus* (and some other members of the typhoid-colon group) which show branching and the formation of lateral buds by following the methods which Murray and I employed. I have repeated the experiment successfully since the appearance of Dr. Hort's important paper, and it seems probable that what I called "dots" in 1904 may correspond to his filter-passing forms.

In conclusion, may I express my admiration of the enthusiasm and patience with which Dr. Hort has followed out his valuable work upon this subject? May one also venture to dissent from the view expressed in your leading article, which seems to regard the evidence for the existence in this group of bacteria of forms small enough to pass through a piece of porcelain as of greater ultimate importance in pathology than would be the complete elucidation of their general morphology? Such a view is not only open to misinterpretation as a disparagement of a great part of Dr. Hort's work, but it seems to stand in striking conflict with the Euclidean doctrine that of necessity "the whole is greater than its part."—I am, etc.,

Oxford, May 29th. E. W. AINLEY WALKER.

[1] Ainley Walker and W. Murray: The Effect of Certain Dyes upon the Cultural Characters of the *Bacillus typhosus* and some other Micro-organisms, BRITISH MEDICAL JOURNAL, July 2nd, 1904.

[2] E. Almquist: Neue Entwickelungsformen des Choleraspirills und der Typhusbakterie, *Centralbl. f. Bakt.*, etc., 1 Abt., Originale, Bd. xxxvii, Heft. 1, S. 18.

## THE ADMINISTRATION OF ANAESTHETICS: A PRELIMINARY NARCOTIC.

SIR,—Captain Marshall's contribution on the administration of anaesthetics at the front, in the JOURNAL of June 2nd, is of great interest and obviously the outcome of a careful and laborious investigation.

His conclusions as to spinal analgesia and chloroform are what I should have expected, and the charts published, assuming them to be typical examples of a fairly large number of cases, should carry conviction.

I do not, however, follow him in his dictum that morphine should be withheld in the presence of shock, or where its advent is anticipated. Nor do I find in his paper any proof of this contention; I am assuming that in the charts he gives the ether anaesthesias were not preceded by its administration. My own experience naturally does not include a large proportion of the particular class of case under consideration, but extending, as it does, over many years and to thousands of operations, it has convinced me of the value of morphine with ether both when shock is already present and when it is anticipated. Since I adopted preliminary narcotics some six years ago shock on the operating table has been conspicuous by its absence, and appears only with extreme rarity in the recovery stage, the latter happy state of affairs being due, I think, to the small amount of ether required after morphine, resulting in no over-stimulation with its subsequent depression.

Captain Marshall's experience is of great value, and it would be interesting to know the reasons on which he founds his objections to morphine. Has he employed it in adequate doses and at an appropriate interval before operation? If not, disappointment is only to be expected.

With regard to the value of warm ether vapour, the administration of which has recently become fashionable, I am afraid I am of those who still remain unconvinced. The specific heat of gases is so low as to be practically negligible. In 43 consecutive cases in which I took the rectal temperature before and after operation, I found it actually rose in 13, remained the same in 1, and dropped in 29. Of these 29, some were already above normal before operation, so the fall did no harm; in the majority of the rest the fall only amounted to 0.2° or 0.4° F., and the only cases in which there was an important fall were those in which it was to be expected from the nature of the operation. It is only fair to state that the ether was not given by the "open drop" method—a wasteful and wearisome procedure which I abandoned after six months' trial—but in my "draw over" inhaler with inspiratory and expiratory valves in which the vapour is warmed and

moistened to some extent by the expired air, the temperature in the face-piece ranging from 70° to 86°, and varying inversely with the strength of the vapour and respiration-rate. Nor is warming necessary to prevent coughing and straining against ether, always provided that alkaloids have been previously administered, and that sudden increase of vapour strength is avoided.—I am, etc.,

London, W., June 4th. G. A. H. BARTON.

## REFRESHMENT HOUSE EXPERIMENT IN CARLISLE.

SIR,—It is a far cry from Plymouth to Carlisle, and I venture to think that if your correspondent in last week's JOURNAL writing on the above subject had lived nearer to the ancient Border city, he would hardly have described the Carlisle experiment as "a colossal failure."

Dr. Simpson is evidently a prohibitionist, and his information is apparently taken from a pamphlet issued in the interest of prohibition propaganda which has had a wide circulation. It is full of misleading statements, and was emphatically condemned at a meeting of the Local Advisory Committee of the Central Control Board held yesterday. This Committee consists of representatives of the Control Board, of the Corporation of Carlisle, of the County Council, of the Licensing Justices of the city and county, and of Labour interests. It is widely representative, and is fully conversant with all the facts. As a member of this committee, will you allow me briefly to recapitulate what has been done by the Board?

In less than twelve months under State purchase we are in a position to state as follows:

1. Nearly one-half of the licensed premises in the city have been closed (44 out of 119)—a reform which would have taken a generation to carry out under the 1904 Act.
2. The abolition of grocers' licences.
3. The limitation of the "off" sale of spirits to less than one-quarter of the premises in which they could be obtained before.
4. The abolition of the sale of spirits on Saturdays.
5. The introduction of food into public-houses.
6. The abolition of direct interest in the sale of intoxicants and the encouragement of the sale of food and non-intoxicants by offering commission to the managers on their sales.
7. The doing away with all advertisements relating to the sale of intoxicants and entirely altering the appearance of licensed premises so as to eliminate all adventitious aids to the sale of intoxicants.
8. The provision by the State of places where rest and refreshment can be obtained without any inducement to buy intoxicants.

Even temperance advocates must admit that these results are of some value in the national interest, and the results of the Board's work have met with the unqualified approval both of the city and the county police authorities.

Dr. Simpson makes a point of the small diminution of the convictions for drunkenness in the first three months of this year as compared with the corresponding period in 1916. It is true it was only 49, but of these 41 occurred in March. If we take the first five months of this year and compare the convictions with those of 1916, the following table is worthy of consideration:

| | 1916. | 1917. | Decrease. |
|---|---|---|---|
| January ... ... ... | 51 | 53 | — |
| February ... ... ... | 73 | 63 | 10 |
| March ... ... ... ... | 89 | 48 | 41 |
| April ... ... ... ... | 98 | 31 | 67 |
| May ... ... ... ... | 114 | 20 | 94 |

The steady decline in drunkenness during the period corresponding to that in which the increase was so alarming twelve months ago is most satisfactory, and what is even more satisfactory is that during the month of May this year there were no assaults on the police, whereas in May, 1916, there were nine charges of assault on the police.

The prohibition of the sale of spirits on Saturdays has had a most beneficial effect. The Order came into force on February 23rd of this year, and since that date there have been fifteen Saturdays. On only one of these occasions has there been an arrest for drunkenness, and that was on St. Patrick's Day. It is clear that the effect of the Order has been to bring about a marked change for the better in the character of Saturday drinking.—I am, etc.,

Carlisle, June 5th. HENRY BARNES, M.D.

SIR,—The important experiment in direct State control of the liquor trade which has been in operation at Carlisle and Annan for some months past, has recently been made the subject of severe criticism in a pamphlet written by the Rev. Wilson Stuart. After a detailed examination of the statements made by Mr. Stuart, the Local Advisory Committee has passed unanimously the following resolution:

> The Carlisle Advisory Committee of the Central Control Board (Liquor Traffic) having considered the pamphlet written by the Reverend Wilson Stuart of Birmingham, entitled, "The Carlisle and Annan Experiment," desire to record that in their judgement, based on an intimate knowledge of the affairs and improved conditions of the city, the description therein suggested of drinking in Carlisle entirely misrepresents the facts, and they deem it their duty to make this emphatic protest against the misleading suggestions contained in the pamphlet.

In view of the valuable experiments now proceeding in this area, the result of which will certainly exercise a very considerable bearing upon any permanent solution of the liquor problem, I venture to hope that you will be so kind as to give full publicity to this resolution, which embodies the convictions of representative citizens of Carlisle and the district.—I am, etc.,

A. F. HARVEY,
Secretary, Temperance Legislation League.

London, S.W., June 6th.

*** Though ready to receive any corrections of matters of fact, we cannot undertake to continue this correspondence.

## "FOOD AT SCHOOL AGES."

SIR,—Recent experience in revising the dietary of an institution for growing boys—from 12 to 18—has warned me that considerable, perhaps lifelong, injury might be caused to growing boys and girls at these ages by misapplied enthusiasm in the direction of food saving. This period of life is, as Burney Yeo points out—

> One of the most critical and important epochs in the life of the individual as regards sufficient and adequate nutrition; it is a time of active growth and development, both physical and intellectual, and it is a time when any serious check to the perfect and complete evolution of the organs and functions of the body may lead to ineradicable mischief, and severely handicap the individual in the subsequent "struggle for existence."

Especially, one may add, as the prospective parents of the race. Pamphlet No. 7, published by the Ministry of Food, points out—

> Children need plentiful food for three reasons: their surface is large compared to their weight, they are growing, and they are generally very active. A child of 8 needs half as much as a grown up, a child of 12 three-fifths as much. A girl of 16 needs as much as her mother, and a boy of 16 may eat as much as his father.

The number of calories (heat units) that should be supplied daily by the food taken is laid down thus (Pamphlet No. 7):

| | Calories. |
|---|---|
| Men, sedentary, and boys over 16 ... | 2,500–2,800 |
| Women, in business, and girls over 13 ... | 2,000–2,200 |

A tall thin person will need 200 or 300 calories more than a plump person.

If children of school ages are rationed, managers and medical officers should see that the necessary number of heat units are supplied by the food. The Ministry of Food Pamphlet No. 7 (National Rations: How to Supplement Them, by Dr. Spriggs) gives a table which renders the calculation of dietary values absolutely simple.

The Ministry of Food never intended to stint the food of growing adolescents. Elder children are an exception to the 4 lb. ration. In a written reply to Mr. Duncan Millar, Captain Bathurst supplies the following table of

what is considered sufficient weekly ration of bread, meat, and sugar for growing children:

| | Bread. | Meat. | Sugar. |
|---|---|---|---|
| Under 10 ... ... | 3 lb. | 1¼ lb. | ½ lb. |
| 10–12 ... ... | 4 lb. | 2 lb. | ½ lb. |
| 13–18 ... ... | 5 lb. | 2½ lb. | ½ lb. |

Finally, to quote the Ministry of Food Pamphlet No. 21—

Every one will agree that the greatest care must be taken to give our children the food they need, whoever else goes short. Upon them will lie the duty of holding what has been won by the blood of the brave. They must be fit in body and mind to make peace more glorious than war by the right use of our dear bought freedom.

—I am, etc.,

D. S. DAVIES, M.D., LL.D.,
Medical Officer of Health.

Bristol, May 30th.

## ARMY AND CIVIL CO-OPERATION FOR MEDICAL ECONOMY.

SIR,—It is with intense satisfaction to those of us who are at the present time combining military and civil work that you continue to urge with much energy the better distribution of the potential energies of the members of the medical profession in medical work. The waste of energy in the past is well known to those of us actually mixed up in the work.

Experience of individual cases does count for something, so that I have no hesitation in giving you my experience; doubtless there are many others of a similar nature. Here is a large industrial town with a territorial hospital of between 2,000 and 3,000 beds, staffed by men nearly all of whom are doing civil work in addition to their military work. By removal for military service a particular district in this town has been denuded of the services of three men—all territorial officers just under military age. This left myself as the only practitioner that was capable of attempting to do their work. The combined panel list of the four of us is between 7,000 and 8,000, of whom 5,000 certainly reside in this district. As a territorial officer *à la suite*, a little over military age, it has lately seemed very probable that I should be ordered to do military work elsewhere. The local Medical War Committee would at present have no say in the matter. It may be suggested that substitutes must be found in such a case. But what a waste of energy! Most of the year it would require the services of two energetic men to do the civil work, and, in addition, one would be necessary to do the military work. Surely there is a strong case for the much better "co-ordination of competing authorities" than there has been in the past.—I am, etc.,

CAPTAIN R.A.M.C. (T.F.)

## MEDICAL BOARDS.

SIR,—I should like to make a few remarks in reply to the letter of "A Believer in Action," which appears in your JOURNAL of June 2nd, p. 749. According to him, the members of recruiting medical boards are paid 24s. a day for examining on an average thirty-two men in the day. He claims also that they are "entitled" to a fortnight's holiday in the summer and at least one half day per week to attend to their private business. They also pride themselves that they work all day on Saturdays.

The undermentioned facts may cause him a few moments of serious thought:

1. Officers of the Territorial Force did something for the country in peace times, and they came to the colours on August 4th, 1914.
2. Having reached the rank of captain by period of service, they are paid 15s. 6d. a day.
3. Few of them have seen or even heard of their businesses for nearly three years.
4. Being officers in the army, they have no "rights" at all—either as to summer holidays or half-days.
5. The families of many of them are in dire straits.

The writer of this letter not only has to perform all his usual medical work as an officer in an ambulance, but at certain intervals of time he acts also as examining officer on a travelling medical board, where his average number of examinations a day is 150.

He will remain up to the end of the war, and at the present moment he has much additional worry occasioned by some "patriotic civilians" who are endeavouring to deprive him of an appointment which he holds in civilian life.—I am, etc.,

June 5th. ANOTHER "PATRIOTIC" TERRITORIAL.

# Obituary.

## J. H. BARTLET, M.D.,

IPSWICH.

BY the death on Whit Sunday, May 27th, of Dr. J. H. Bartlet of Ipswich a medical link with the early days of the nineteenth century is broken. Dr. Bartlet's grandfather, who was of Scottish extraction, began to practise in Ipswich within the first decade of that century. He died in 1856, and was succeeded by his son, Dr. A. H. Bartlet, who held the leading place among the physicians of the borough for half a century, and was the first member of the honorary staff of the East Suffolk and Ipswich Hospital when it was established in 1836.

John Henry Bartlet was born on June 9th, 1829, received his early education at Ipswich School, and then went to University College, London. He took the diplomas of M.R.C.S. in 1852 and of L.S.A. in 1854; he graduated M.B.Lond. in 1858, and M.D. in 1860. He was engaged in general practice in Ipswich for many years, and was a member of the active medical staff of the hospital.

Dr. Bartlet was a fellow student of the late Lord Lister, and remained his life-long friend, and as surgeon to the Ipswich Hospital was one of the earliest exponents of antiseptic methods in England. In 1886 he retired from general practice, and until recently practised as a consulting physician. He continued to be a member of the consulting staff of the hospital, and succeeded the late Mr. Felix T. Cobbold, M.P., as President, an office which he held until his death. He took a very great interest in the welfare of the institution; the out-patients' department and the porter's lodge stand as permanent memorials of this interest, while the endowment and improvement funds have received augmentation from time to time by donations in cash from him aggregating £3,600.

Dr. Bartlet was a J.P. for the borough of Ipswich and the county of Suffolk, and the way in which he became associated with the municipal work of the borough is thus related by the *East Anglian Daily Times:*

In October, 1894, in view of the prospect during the ensuing twelve months of the second visit of the British Association to the borough, the members of the council were anxious to elect to the mayoral office a gentleman of scientific attainments; opinion pointed to Dr. Bartlet, who, however, was without experience of corporate life. Moreover, hitherto there had been no idea of going outside the council chamber for the occupant of the civic chair. The council, by general consent, deemed it a fitting opportunity for making a new departure, and Dr. Bartlet, coming out of his retirement, consented to accept the responsibilities of the mayoralty during a year when large demands on time and liberality were certain. The British Association gatherings were marked by generous hospitality, and when his period of office had closed it was generally conceded that the success attained was without doubt due in no small degree to the untiring energy and personality of the mayor, while the highest traditions of the office were fully maintained. His interest in the affairs of the borough was continuous for many years.

Among other benefactions to Ipswich Dr. Bartlet some years since gave the parochial hall in St. Peter's, with which the family had close association—this being, like the out-patients' department building at the hospital, in memory of Mrs. Bartlet, who predeceased her husband by about eight years.

## RICHARD HUGH BREW.

IT is right that a tribute of respect and admiration be paid to the memory of Richard Hugh Brew, who died at Chew Magna on May 16th at the age of 55. The only son of Richard St. John Brew, an officer in a West Indian Regiment, who died in the Bahamas of yellow fever at the age of 27, he was born at Ballyvaughan Rectory, co. Clare, the house of his grandfather, was educated in Galway and at the medical schools of Dublin and Edinburgh, and took the diplomas of L.R.C.P., L.R.C.S. and L.M.Edin. in 1884.

Having been for a few years an assistant at Chesham, he settled in Birmingham, married in 1890, and soon afterwards moved to Chew Magna, where he was in practice for twenty-three years. It has been written of him in a local journal that "he took a deep and lasting interest in the social welfare of the village," and the large concourse which met at his funeral on May 20th surely spoke of the love which every one of every class had for him.

Of manly physique, the picture of health and vigour, his bodily presence was the outward sign of the fine, strong spirit within. The writer had known him for the last eleven years—since his own retirement into the West Country—and as brother, sometime patient, and friend, had come to hold him, from his sterling worth of heart and head, and his sound professional knowledge, in the highest esteem. Gifted in no ordinary degree with the power of intuition, which is really the result of deep-laid and thoughtful experience, he went quickly and surely to the root of every malady, and seemed to have a right judgement in all things. Prompt in decision, fearless in opinion, without hesitation or ambiguity in speech, he straightway inspired confidence; and take him for all in all, he was to my mind one of the best doctors I have ever known. Then, alas, in the full tide of his work and prosperity, he was smitten down in the spring of 1915 by an obscure illness, due, it was thought, to some bacillary infection. He was at death's door, but rallied, recovered—it was thought permanently—and had been at work again for nearly a year, when there was a relapse in severer form. Nor can it be doubted that stress of work, the grave anxieties of this disastrous time, and, above all, the loss of Cyril, his much-loved younger son—a charming, gallant boy, who held a commission in the Irish Guards and who died somewhere near Ypres after terrible wounds last October—undermined his natural strength and lowered his resisting powers.

The end came somewhat suddenly after ten months of weary suffering, the diagnosis being still obscure. Only a country practitioner, but withal a man of noble, stainless character, of true humility and "gentleness untired," a keen sportsman both by river and on moor, ever ready to befriend the poor, and implicitly trusted in every walk of life. He will be long remembered and sadly mourned. May he rest in peace.

H. W. P.

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DR. ARTHUR FREDERICK GAMBLE CODD died on May 24th. He was the son of Mr. Arthur Gamble Codd, barrister of the Inner Temple, and received his medical education at St. George's Hospital, where he was a good football player, being twice included in the team during the three years when St. George's held the challenge cup. He was second in the Henry Charles Johnson anatomy competition, assistant demonstrator of anatomy, and won the Brackenbury prize in medicine and the William Brown £40 exhibition. He became house-physician in his fifth year, and afterwards resident obstetric physician. He took the diplomas of M.R.C.S. in 1882 and L.R.C.P.Lond. in 1883, graduated M.D.Durh. in 1886, and became F.R.C.S.Eng. in 1888. After two years in the P. and O. service he settled in practice at Bromley, where he continued his work up to the time of his fatal illness. He was M.O.H. for Bromley, certifying factory surgeon and honorary medical officer to the Bromley Cottage Hospital. In 1905 he married Ada Margaret Cooper, and leaves three sons and one daughter. A friend of thirty-seven years' standing writes: "So simple was his nature, so unassuming and modest, that publicity was to him nothing short of pain, and he would be the first to deprecate any 'appreciation' even by so old a friend as myself. He had a strong personality and firm convictions, combined with a gentleness and a kindness that were remarkable. Hundreds will testify to his many deeds of kindness, monetary and otherwise. The profession has lost a most zealous and keen member in him, whilst his patients have lost a true friend and physician. The sympathy of friends and patients will go out towards his widow and the four children, all under 10 years of age. Though only 60 years of age, his working life (as medical lives go) has been long; during that time he first helped to support his mother and sister. He died as he would have wished, in harness; the shortness of his illness (pleuropneumonia) was in accordance with his desire."

DR. GEORGE GARDNER, who died at a nursing home in Glasgow on May 27th, aged 40, was the son of the late Mr. Robert Gardner, of Craigton, Milngavie. He graduated M.B., Ch.B.Glasg. in 1899, and M.D. in 1902. He had held the post of house-physician to the Royal Hospital for Sick Children, Glasgow. He settled in practice in Falkirk about thirteen years ago. He had held the office of secretary to the Stirling Branch of the British Medical Association, was secretary to the Panel Committee, and one of the medical members of the Burgh Insurance Committee. When the demand for doctors for the army was made Dr. Gardner joined in May, 1915, and served for a year on the staff of a general hospital at Etaples, where his work was so appreciated that his colonel sent in his name for mention in dispatches. He subsequently returned to his practice in Falkirk, but had applied for a commission in the R.A.M.C., and was expecting to return to military service at an early date when his illness supervened. He is survived by his widow and one son. The funeral took place at New Kilpatrick Cemetery, Bearsden, on May 30th, and was of a private character, only relatives and one or two intimate friends being present.

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DR. OSWALDO CRUZ, who recently died at Rio de Janeiro, at the age of 46, was one of the foremost hygienists and bacteriologists of Brazil. As Director of Public Health he laboured with absolute singleness of purpose and utter disregard of political influences for the improvement of the sanitation of Rio de Janeiro. So drastic were his reforms that he once almost caused a revolution against the Government. He rigorously isolated all cases of infectious disease, and insisted on the thorough disinfection of the excretions of patients and of their dwellings. He pulled down unhealthy houses on so extensive a scale that whole quarters of the city were wiped out. He organized campaigns against mosquitos, and was untiring in devising measures for the safeguarding of human life. In this way he succeeded in three years in freeing the capital from yellow fever and plague. In 1908 he began a war against malaria and small-pox in Rio, which he carried on with great success. After much opposition he gained the confidence of his fellow countrymen to such a degree that he was accepted almost as a hygienic dictator throughout Brazil, to all parts of which he was called on the outbreak of epidemics. In 1900 he founded an institute of bacteriology and serum-therapy in Rio de Janeiro, to which in 1908 the grateful citizens gave his name. Thanks to the energy of Cruz and the enlightened liberality of the Brazilian Government, it has grown into one of the finest institutes of parasitology in the world. There Cario Chagas discovered the cause of chronic infective thyroiditis, and much other valuable research work has been done. The proceedings of the institute are issued in a beautifully illustrated volume; it was formerly published in Portuguese and German, but since Germany has put herself outside the pale of civilization French has been substituted for the latter language.

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DR. JOSÉ M. ALVAREZ, professor of hygiene in the University of Cordoba (Argentine), died on December 22nd, 1916. He was the author of a work, *La Lucha por la Salud* (The Struggle for Health), which won for him a great reputation in his native country. He played a leading part in public life, being a member of the provincial senate, deputy to the National Congress, and Governor of the Province.

# Universities and Colleges.

## UNIVERSITY OF OXFORD.

THE Theodore Williams scholarship of the value of £100 for medicine at Pembroke College, Oxford, has been awarded to Frederic M. Wright, of Marlborough College and Bournemouth Technical School.

## UNIVERSITY OF CAMBRIDGE.

DR. A. E. SHIPLEY, Master of Christ's College, has been elected Vice-Chancellor for the ensuing academical year, which commences October 1st.

The following medical degree has been conferred:

M.B.—J. H. Rees, King's.

# Medical News.

THE Minister of Munitions has issued an order requiring persons engaged in the manufacture, purchase, or sale of artificial human eyes to make a return of stocks and materials within seven days to the Director of Optical Munitions, 117, Piccadilly, W.1.

DR. H. B. BRACKENBURY, Chairman of the Insurance Acts Committee of the British Medical Association, has been appointed a member of the Departmental Committee set up by the President of the Board of Education to inquire into the salaries of elementary school teachers.

THE Rev. J. W. Hayes, of West Thurrock Vicarage, Grays, Essex, has prepared a leaflet (price 2d.), giving a number of recipes for using barley, rye, oatmeal, rice, and maize flour for making bread, biscuits, and potato substitutes. He also gives two other leaflets (1d. each) giving additional maize recipes.

OWING to the spread of small-pox in Berlin the authorities have warned medical men to take precautions by vaccination, by revaccination of all persons over 40 not vaccinated since the age of 12, and by bearing in mind the risk of small-pox "carriers." At the end of February there were about 50 cases of small-pox in the Berlin hospitals; most of the patients were tramps and beggars, and nearly all were over 40.

ACCORDING to an official statment by Mr. Pike Pease, the number of British prisoners interned abroad at the end of our financial year was: Officers, 1,898; men, 36,583; civilians, 4,350, making a total of 42,831. The Postmaster-General had previously stated that this compared with 30,710 last year. The increase does not appear to have taken place recently, for Lord Newton stated in the House of Lords on February 22nd that the total number of British prisoners in Germany was something under 40,000. The total number of German civilians interned in this country and in the Overseas Dominions is about 36,000. We have no note of the total number of German military prisoners in our hands, but the number taken on the Western Front from April 9th to the end of May was 19,736, including 393 officers.

THE National Conference of Friendly Societies has forwarded to the Prime Minister a memorial in relation to the proposed Ministry of Health. This states that the friendly society organizations welcome further recognition of the need for preserving the nation's health, and strongly endorse the efforts now being made to secure national provision for maternity and child welfare, better housing, and the treatment of tuberculosis. The friendly societies are anxious that, in the formation of a Health Ministry, due weight should be given to the extension of the National Insurance Act benefits to the dependants of insured persons, including the establishment of child clinics and the institution of a national nursing scheme. They urge the Prime Minister, before any decision is reached, to appoint an impartial committee to investigate the whole matter.

WE have received copies of reports prepared in anticipation of a discussion on the relation of the glands of internal secretion to gynaecology and obstetrics at the forty-second annual meeting of the American Gynaecological Society, which was to take place early this month. The relations, real or asserted, of the female generative organs to the pituitary, pineal, parathyroid, thyroid, and thymus glands are considered from physiological, pathological, and clinical points of view in several monographs by experts. Papers are included which treat of the endocrine function of the pancreas and its relation to the sex life of women, the influence of the adrenal bodies on the genital system, the relation of the ovary to the uterus and mammary gland, and the placenta regarded as a gland of internal secretion; there are memoirs also on transplantation of ovarian tissue after hysterectomy, and the preparation and standardization of ovarian tissue.

THE annual report of the chief inspector of factories and workshops for the year 1916 (Cd. 8570, price 2d.) has been published by the Home Office. In the absence of Sir Arthur Whitelegge through illness, the report of the work of the department is supplied by Dr. H. M. Robinson, deputy chief inspector of factories. Miss A. M. Anderson, H.M. principal lady inspector of factories, contributes an interesting account of the effect of the third year of war on the industrial employment of women and girls. Dr. Robinson points out that beyond the ordinary range of duties the most important work done by his department during the year was in connexion with the substitution of women in manufacturing industries. He notes that it is fairly well recognized that continuous and excessive overtime very soon produces lassitude and slackness among the workers, injuriously affecting efficiency both in quality and quantity of work.

ON the occasion of the opening, on May 31st, at Sidmouth of a hospital for the treatment of officers suffering from stiff joints caused by wounds Dr. W. Gordon of Exeter delivered an address in which, after congratulating Sidmouth upon the establishment of a centre for treating the war disabilities of officers by combined physical methods, such as radiant heat, massage, whirlpool, and aëration baths, and medical appliances, he traced the progress of this line of treatment, giving a description of the methods now in general use and their value in the treatment of war disablement. One central fact proved beyond question was the immense advantage of the preparatory use of heat in the treatment of crippled limbs by massage and manipulation. Another point he insisted on is that treatment must be undertaken at the earliest possible moment after the wounds have healed if the greatest benefit is to be obtained. In respect of appliances Sidmouth now had all the advantages possessed by Paris and London for applying the new system of treatment, in addition to which it had its own arrangements for sea-water baths to widen the scope of its usefulness. Dr. Gordon concluded his address with the hope that there would be no delay in generalizing this method of treatment throughout the country.

# Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

THE telegraphic addresses of the BRITISH MEDICAL ASSOCIATION and JOURNAL are: (1) EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand London*; telephone, 2631, Gerrard. (2) FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand London*; telephone, 2630, Gerrard. (3) MEDICAL SECRETARY, *Medisecra, Westrand London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

## QUERIES.

F.R.C.S. asks what are the quickest recorded results, after nerve grafting, as regards recovery in respect of (*a*) anaesthesia, (*b*) muscular action.

R. asks for the name of a maker of an inguinal truss consisting of an elastic band (about three inches broad) fitting round the hips, with a pad in front to keep the inguinal canal closed.

### INCOME TAX.

UNCERTAIN owns his residence and uses it partly for professional purposes. He inquires how the deduction for professional use should be made.

*** Using the figures supplied, the net rental value of the house, £48, should appear on the statement of total income as in effect rent received; but in calculating the professional profit a deduction should be made of £16 as being rent paid for the professional portion of the house. Our correspondent pays income tax under Schedule A as if he received a net rent of £48, and out of that expends £16 for professional purposes; the £48 being already assessed to tax in full, he is entitled to deduct a proportion of this sum as if it were an actual out-of-pocket payment for professional accommodation.


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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

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